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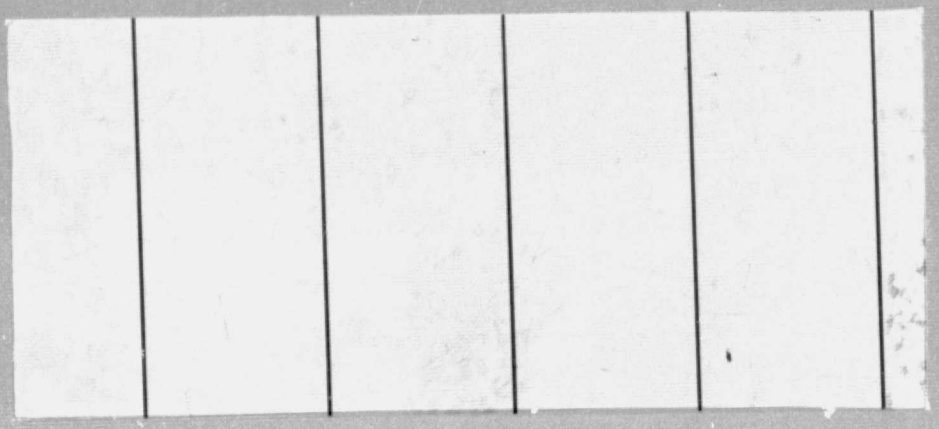

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MAINTENANCE COST STUDY OF ROTARY WING AIRCRAFT

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AMES RESEARCH CENTER

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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I. Introduction

The vertical takeoff and landing (VTOL) aircraft market has had substantial growth in both the military and civil sector in the past decade. Especially apparent is the rapid expansion of helicopter use in natural resource exploration, law enforcement and civil utility applications. These applications have indicated the need for more advanced rotary wing technology and have pointed the way to other applications. An important factor in the utility of advanced VTOL aircraft is their expected maintenance costs. Recent military experience has indicated that helicopter maintenance manhours per flight hour may be double those of fixed-wing aircraft of the same payload capacity. Helicopters in civil transport use have been indicated to have high maintenance costs; although, this is from limited data and these are generally older aircraft in limited use. More current helicopters employing the latest advances in rotor and drive system technology appear to have somewhat reduced maintenance requirements. Increased daily utilization, likely to be realized with greater daily utilization of future VTOL aircraft, would further reduce unit maintenance costs.

In view of the importance of maintenance requirements to the economic viability and operational suitability of VTOL aircraft,

the ability to predict and evaluate future maintenance needs is necessary. Of prime interest is the impact which new technologies may have on maintenance costs. This includes the ability to assess the potential gains through introduction of advances in the propulsion system components and flight controls mechanisms, two areas of special importance to VTOL efficiency and effectiveness.

The primary objective of this rotary wing aircraft maintenance study was to determine the feasibility of predicting maintenance costs based on major system characteristics and aircraft time in flight. Time and budget would not permit an analysis of the entire cost spectrum involved in rotary wing maintenance; however, it seemed possible that feasible maintenance characteristics could be established by careful examination of unscheduled maintenance. This would provide the first step in understanding the relationships between maintenance costs and design factors. Then, if relationships can be identified and quantified for existing aircraft, these will become a sound foundation for building estimating techniques with relation to future advanced technology vehicles.

Reported herein is a description of the study approach, the source and uniformity of the data, the methods of analysis employed, and a discussion of the development of each maintenance estimating relation.

Included as part of this report, in the Appendix, is the tabulation of all the basic fleet maintenance data.

This Introduction section and the subsequent Summary discussion constitutes an executive summary.

II. Summary

This limited study established the feasibility of predicting rotary wing operation maintenance costs by means of several aircraft design factors for the dynamic systems of the aircraft. To show this, a large sample of unscheduled aircraft maintenance data was assembled and analyzed in terms of the aircraft design factors.

The dynamic system for this study was defined as the four systems: engines, drives and transmissions, rotors, and flight controls. Data were necessary at the subsystem level to accomplish the study objectives. Four data sources were considered. They were the three military services of the Army, Navy and Air Force; and the commercial helicopter operators. Criteria established for the data base were most nearly met by use of the information collected under the Navy Maintenance Material Management (3-M) System. The necessary data were obtained from the Navy detailing all the unscheduled maintenance for the calendar years 1974 and 1975 on 13 types of aircraft in operational (non-combat) use by the Naval and Marine forces. The aircraft included as sources of data were the UH-1E, UH-1H, AH-1J, UH-1N, SH-2F, SH-3A, SH-3G, SH-3H, CH-46D, CH-46F, CH-53A and CH-53D. The data were subjected to statistical tests in order to apply the best statistical analysis to the data set for the development of cost estimating equations. The resultant data available for use in

the cost analyses contained 260,202 maintenance actions representing 1,150,186 manhours of labor. Users of these aircraft made 209,224 flights for a total duration of 351,580 flight hours.

Multiple regression analysis was used to correlate aircraft design and operational factors with maintenance manhours per flight hour. Applicable dependent variables were selected by examination of relationships between design and maintenance history and by testing in regression analysis. The equations which resulted for each of the dynamic systems are as follows in terms of maintenance manhours (MMH) per flight hour (FH):

Rotor System:

$$MMH/FH = .1439W - .07933D + 1.01333$$

Drive/Transmission System:

$$MMH/FH = .0021W + .07559G - .39997F - .03247M + 1.26165$$

Engine System:

$$MMH/FH = .48668N - .69131F - .20819M - .14598H - .03940W + 5.17397$$

Flight Control System:

$$MMH/FH = .02124H - .46127F - .14422M - .05581B + 3.88951$$

where the independent variables are:

W = Maximum Take-Off Gross Weight

H = Total Horsepower

F = Average Flight Duration

N = Number of Engines

M = Flights Per Aircraft Per Month

B = Total Number of Rotor Blades

D = Main Rotor Diameter

G = Transmission Gear Ratio

For each equation, the correlation coefficient was in excess of .9. Satisfactory "F" and "T" values were also obtained. When the above maintenance labor predictions were tested, these equations compared favorably with actual values. Also, a separate equation was developed for the total dynamic system as follows:

$$MMH/FH = .34026W - .3529D - .15414M + 8.24741$$

Total MMH/FH were computed using both the above equation and by means of summing the results of the predictive equations for individual subsystems.

Figure 1 shows these results compared with the actual field data. It can be seen that either method of estimating total maintenance labor produces results which compare favorably with the actual values.

Within the data base there are four aircraft models with very similar design characteristics. Each showed some variation in maintenance requirements. These are the A, D, G and H models of the SH-3 series helicopter. These data afforded the opportunity to probe deeper into system maintenance requirements by investigating at the subsystem level. This phase of the study was not originally planned. Thus, it was not practical to fully establish causal relationships between design characteristics and maintenance requirements. The results of these analyses suggest that some additional insights into maintenance and design interactions can be obtained by investigations directed at the subsystem and component level.

Another area which should be pursued is the applicability of the predictive equations developed in this study to commercial helicopter users. All estimating relations were developed using data from military users. How well these relationships developed will predict the maintenance characteristics for commercial users should be investigated. This includes the availability and uniformity of non-military data. Another

area to be investigated would be the applicability of these estimating relations to the helicopter maintenance requirements of the Army, Air Force, and Coast Guard operations.

The results thus obtained clearly indicate the feasibility of predicting maintenance costs from design and operating data. It is apparent that this study should be pursued further by investigating the applicability of commercial and military user data and by analysis of design and maintenance interactions at the lower subsystem and/or component level. If these studies could be made, it should be possible to predict future maintenance requirements and to quantitatively evaluate the impact of new technology on the maintenance for the dynamic systems of advanced VTOL aircraft.

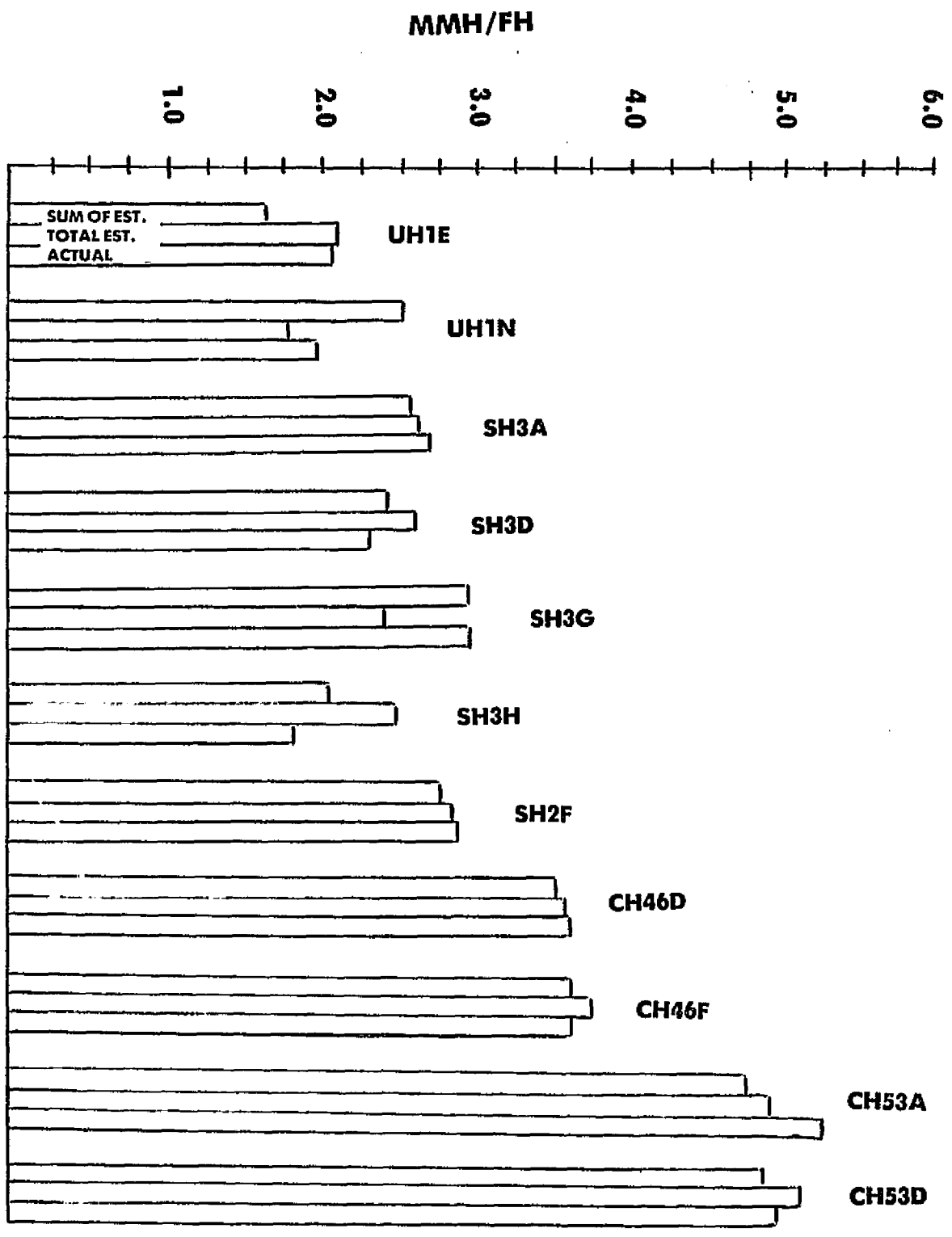

DYNAMIC SYSTEM MMH/FH ESTIMATES
MMH/FH
1.0
2.0
3.0
4.0
5.0
6.0
SUM OF EST.
TOTAL EST.
ACTUAL
UH1E
UH1N
SH3A
SH3D
SH3G
SH3H
SH2F
CH46D
CH46F
CH53A
CH53D

FIGURE 1

III. Study Limitations

The primary objective of the rotary wing aircraft maintenance cost study was to determine the feasibility of predicting maintenance costs based on top level design variables and utilization factors. Time and budget would not permit evaluation of all the costs involved in rotary wing maintenance. It was decided that feasibility could be established by careful examination of a few of the more major contributors to the overall costs. For rotary wing aircraft the total maintenance labor costs can be expressed as:

Total Cost = Unscheduled Cost + Inspection Costs + Support Cost

Unscheduled maintenance is that maintenance which is performed to correct defects resulting from normal operational wear or damage. It includes the cost for the repair of defects detected during scheduled inspections as well as the bench repair of removed components. Inspections include all maintenance actions which are prior planned by the operator. They occur either for a certain calendar period or time (operating hours) has accrued. Support is all the usual routine servicing actions involved in aircraft operation. These include such items as fuel servicing, washing, cleaning and ground handling. The support costs are most dependent on a particular operator's policy and are only slightly impacted by design factors.

The unscheduled maintenance costs were examined for this study because they are unpredictable and account for the larger percentage of maintenance labor hours than inspections. This can be seen in the comparisons of the total non-support labor hours presented in Table 1. This table is for two randomly selected but typical one month operations of SH3D aircraft, and the unscheduled labor accounts for approximately 70% of all non-support type manhours.

TABLE 1

SH3 LABOR HOUR BREAKDOWN

	MONTH 1		MONTH 2	
	HRS	%	HRS	%
UNSCHEDULED LABOR	5348	71	2143	69
INSPECTION LABOR	2148	29	986	31

With over two-thirds of the total maintenance costs being represented in the unscheduled maintenance category, it was decided to concentrate the study effort in this area. The study was further limited by selection of those cost items that are related to overall aircraft design and represent the aircraft maintenance cost. The aircraft dynamic subsystems appear to meet these criteria. In Table 2 are tabulated the maintenance manhours expended for unscheduled maintenance for the dynamic subsystem

TABLE 2

DYNAMIC COMPONENT AND TOTAL AIRCRAFT

MAINTENANCE MAN HOUR COMPARISON

AIRCRAFT TYPE	TOTAL UNSCHEDULED MMH	DYNAMIC SUBSYSTEMS	
		UNSCHEDULED MMH	% OF TOTAL
UH1E	160305	70790	44
UH1N	142332	79948	56
CH46D	483125	216551	45
CH46F	483232	234868	49
CH53D	409106	190266	47
CH53A	218182	100282	46
SH2F	281973	99977	35*
SH3A	221576	68810	31*
SH3D	349298	100203	29*
SH3G	388622	119059	31*
SH3H	123559	32860	27*

* Aircraft include sophisticated avionics

NOTE: Above data are derived from Navy 3M records covering calendar years 1974 and 1975 for all USN and USMC using activities.

over a two year period for eleven different rotary wing aircraft. Dynamic subsystems account for from 27% to 56% of the total manhours expended. The dynamic subsystems are the engines, drives, transmissions, rotors, and flight controls. It should be noted that the SH2F and SH3 series aircraft have an antisubmarine warfare mission and are thus equipped with more extensive and sophisticated avionics which require considerable maintenance. Thus the dynamic subsystems in these types accounted for only from 27% to 35% of the total manhour expenditures, but in actual hours expended, the 11 aircraft are comparable. For the other aircraft types, their dynamic components contributed from 44% to 56% of the total maintenance labor.

It thus appeared from this cursory analysis that by investigating the unscheduled maintenance labor costs for the dynamic subsystems, since they represent over 50% of the maintenance costs of rotary wing aircraft, they would give representative results and determine the feasibility of predicting maintenance costs from design considerations. Within these boundaries, the study would be structured to investigate the relationships between major aircraft design factors and maintenance labor requirements.

Since multiple regression analysis is the analytic tool usually selected for use in this type of study, successful application of this

technique requires a data base with a sufficient number of observations to provide statistical validity. The first phase of the study addressed this requirement, and a group of rotary wing aircraft types were selected and a sample of maintenance history was collected for each. Also necessary was the parallel collection of aircraft design information to select the independent variables. These preliminary analyses of design and maintenance data were performed to select those variables most likely to explain differences in maintenance history. The selected variables were then subjected to regression analysis to test their applicability and predictive capability. This sampling gave an indication of the number of different helicopter types, models, operations and extent of maintenance and design data required.

IV. Data Base Development

Proper selection of data was considered a key to successful accomplishment of the primary study objectives. The data base accumulated had to have sufficient range and depth to enable an evaluation of the design impact on the maintenance costs. At the same time, data collected had to be homogeneous; that is, it needed to be as free as possible of outside influences such as differences in maintenance training and capability and operational procedures that impact costs. The credibility of the data had to be high; that is, it could not contain built-in bias because of reporting practices structured for purposes other than reliability and maintenance recording.

There are four basic data bases available: that is the three services, U. S. Navy, U. S. Army, U. S. Air Force, and the commercial operators. The commercial operators maintenance costs are not collected uniformly, are widely scattered, and are not usually available to outsiders. The U. S. Army data base is a newer reporting system, still has growing-pain problems, contains much battle damage information and has some reporting bias. The U. S. Navy Material and Maintenance Management (3-M) data bank appeared to possess most of the desired qualities, and thus it was selected.

The 3-M data base contains maintenance reporting from both the USMC and USN which provides a wide sample of aircraft type. In terms of depth, the number of aircraft in the fleet and the flying hours accumulated, the sample size was sufficiently large for each aircraft type. Data is reported at a detailed level so that information can be extracted at the major subsystem, major assembly, or subassembly level. The 3-M data is quite homogeneous in that all maintenance is performed in accordance with the same policy dictated by fleet-wide directives. The skill level and training of mechanics and technicians is also as uniform as it is possible to obtain. Finally, 3-M is structured solely to record reliability and maintainability data and past experience with this data base has shown it to be highly credible and relatively free of bias.

The 3-M data were examined covering 13 aircraft types, 5 systems and 8 users in the Navy and Marine Corps. These aircraft are all currently in U. S. Navy useage and are: UH1E, UH1H, AH1J, UH1N, SH2F, SH3A, SH3D, SH3G, SH3H, CH46D, CH46F, CH53A and CH53D. The aircraft systems were: Rotor, Transmission/Drive, Flight Controls, Engine and Engine Installation. Appendix A summarizes by user these basic 3-M data aggregated to the system level.

Maintenance functions are reported in the Navy 3-M system by means of a Work Unit Code (WUC). WUC's are structured, seven digit, codes. The code defines major systems by the first two digits, subsystems by the third and fourth digit, assemblies by the fifth digit, and the last two digits indicate subassemblies. Data for this study was extracted only at the major system level; i.e., the first two digit WUC. The WUC's for the five major systems analyzed were: Flight Controls, WUC 14000; Rotor System, WUC 15000; Engines, WUC 22000; Drives/Transmissions, WUC 26000 and Power Plant Installation, WUC 29000. Data for WUC 22000, Engines, and WUC 29000, Power Plant Installation, were combined for analysis purposes.

Table 3 lists the subsystems (4 digit WUC) included in each major system. The breakdown given is for the SH3 series aircraft. There are only minor variations for other aircraft series. This list will provide a frame of reference for the cost equations described in a later section.

To properly understand the items in the systems and subsystems, it was necessary to refer to the aircraft technical manuals for each of the helicopters. These manuals gave detailed information on each piece of equipment and its proper maintenance, repair and operational procedures.

TABLE 3

SH3 Work Unit Code Structure

14000	Flight Controls
14110	Collective Pitch Mechanical Components
14120	Collective Pitch Electrical
14210	Cyclic Pitch Mechanical Components
14310	Directional Mechanical Components
15000	Helicopter Rotor System
15110	Rotary Wing Blade Components
15210	Rotary Wing Head
15220	Rotary Wing Electrical Components
15310	Rotary Rudder Blade Components
15410	Rotary Rudder Head
15420	Rotary Rudder Head Electrical
15510	Blade Fold System
15520	Rotary Wing Brake System
22000	Turboshaft Engines
22410	Compressor Section
22420	Combustion Section
22430	Turbine Section
22450	Accessory Drive Section
22460	Main Fuel System
22470	Lubrication System
22480	Electrical System
22490	Ignition System
224A0	Bleed Air System
224B0	Speed Decreaser Installation

TABLE 3 - Continued

SH3 Work Unit Code Structure

26000	Drives-Transmissions	
	26110	Main Gearbox
	26120	Main Gearbox Electrical Components
	26210	Oil Cooler/Blower Components
	26310	Tail Drive Shaft Components
	26410	Intermediate Gearbox
	26510	Tail Gearbox
29000	Power Plant Installation	
	29110	Detachable Mount Components
	29120	Fixed Mount Components
	29210	Detachable Cowling
	29310	Throttle/Power Lever
	29380	Power Management
	29420	Aircraft Lube Components
	29510	Ignition/Starting Components
	29620	Aircraft Exhaust Components
	29810	Engine Cooling Components
	29B10	Engine Antiicing Components

The data covers all unscheduled maintenance for calendar years 1974 and 1975. Manhours reported cover total hours required to clear a reported maintenance action - both on the aircraft (organizational level) and off the aircraft on a removed component (intermediate level). Labor hours to perform scheduled maintenance are not included; however, labor required to correct defects discovered during inspections are included. Overall, these data encompass 308,217 maintenance actions resulting in the expenditure of 1,413,146 maintenance manhours, and the maintenance was accrued because of 395,658 flights covering 484,471 flight hours.

These data were tested using analysis of variance techniques. Three questions were addressed. First, since data was reported from three basic types of user (fleet, reserve, special detachment), the first test was to determine if uniform reporting and maintenance practices were being followed. This would be done by comparing data from different users of the same aircraft. Analyses were performed for all combinations of identifiable units using 2 year averages of maintenance manhours per flight hour (MMH/FH). This analysis used the statistical F test with $\alpha = .05$, and six cases of statistically significant data variation between users of the same aircraft were detected. Five of these involved non-fleet aircraft users. As a result of this analysis it was decided

to retain only data reported by fleet users for cost analysis. These results are summarized in Table 4. For each dynamic subsystem, there are listed each of the identifiable user units, and those units with significant statistical data variations are denoted by an "S". It is readily apparent that the users with significant data variables (S) are the non-fleet users.

The second question addressed in the data testing phase related to the uniformity of data over time. Data was obtained from the Navy 3-M system as six month summaries covering two calendar years. Data from these six month summaries were compared to each other using the mean value of MMH/FH of all users of the same aircraft. The examinations were performed for each aircraft system by applying the F test with $\alpha = .05$. Table 5 summarizes the results. Six cases of significance were detected. These were distributed over the five subsystems and all involved the first six month data period. There was no apparent reason for these differences; and thus rather than rejecting 25 percent of the data on a preemptive basis, it was decided to utilize the combined two year maintenance history.

The final check was to insure that a statistically significant difference did occur in maintenance data on the same system in different

TABLE 4

ANALYSIS OF VARIANCE BETWEEN USERS

Flight Control

		CNAL	CNAP	FMFLANT	FMFPAC	MARNFMF	NASC	NATRA	RESFOR
Naval Air Forces, Atlantic	(CNAL)	X							
Naval Air Forces, Pacific	(CNAP)		X						
Fleet Marine Forces, Atlantic	(FMFLANT)			X					
Fleet Marine Forces, Pacific	(FMFPAC)				X				
Non Fleet Marine Forces	(MARNFMF)					X			
Naval Air Systems Command	(NASC)						X		
Naval Training Activity	(NATRA)	X	X	X		X		X	
Reserve Forces	(RESFOR)			X				X	X

Rotors

	CNAL	CNAP	FMFLANT	FMFPAC	MARNFMF	NASC	NATRA	RESFOR
CNAL	X							
CNAP		X						
FMFLANT	S		X					
FMFPAC				X				
MARNFMF				S	X			
NASC						X		
NATRA	X	X	X		X		X	
RESFOR			X				X	X

X - not applicable or insufficient data

S - significant variance

TABLE 4 - Continued

ANALYSIS OF VARIANCE BETWEEN USERS

Engine Unit

	CNAL	CNAP	FMFLANT	FMFPAC	MARNFMF	NASC	NATRA	RESFOR
CNAL	X							
CNAP		X						
FMFLANT			X					
FMFPAC				X				
MARNFMF			S		X			
NASC						X		
NATRA	X	X	X		X		X	
RESFOR		S	X				X	X

Transmissions

	CNAL	CNAP	FMFLANT	FMFPAC	MARNFMF	NASC	NATRA	RESFOR
CNAL	X							
CNAP		X						
FMFLANT			X					
FMFPAC				X				
MARNFMF					X			
NASC						X		
NATRA	X	X	X		X		X	
RESFOR		S	X				X	X

X - not applicable or insufficient data

S - significant variance

TABLE 4 - Continued

ANALYSIS OF VARIANCE BETWEEN USERS

Engine Installations

	CNAL	CNAP	FMFLANT	FMFPAC	MARNFMF	NASC	NATRA	RESFOR
CNAL	X							
CNAP		X						
FMFLANT			X					
FMFPAC				X				
MARNFMF					X			
NASC						X		
NATRA	X	X	X		X		X	
RESFOR		S	X				X	X

X - not applicable or insufficient data

S - significant variance

TABLE 5

ANALYSIS OF VARIANCE BETWEEN THE 6 MONTH

TIME PERIODS FOR ALL 11 AIRCRAFT

	1 to 2	1 to 3	1 to 4	2 to 3	2 to 4	3 to 4
Flight Control		S	S			
Rotors		S				
Engine Unit	S					
Transmissions		S	S			
Engine Install.						

Time Periods: 1 - 1/74 to 6/74 2 - 7/74 to 12/74

3 - 1/75 to 6/75 4 - 7/75 to 12/75

S - significant variance

aircraft. The results of the F tests are summarized in Table 6. This table shows that differences did exist.

One other subjective test of the data was exercised. This resulted in the elimination of the AH1J aircraft and its data from consideration because of its normal flight useage. All the other aircraft are used primarily in a utility function while the AH1J has primarily an attack mission.

The resulting data base available for use in the cost analysis contained 260,202 maintenance actions representing 1,150,186 manhours of labor. Data was from fleet users only - CNAL, CNAP, FMFLANT and FMFPAC, and it includes 11 aircraft types - UH1E, UH1N, SH2F, SH3A, SH3D, SH3G, SH3H, CH46D, CH46F, CH53A and CH53D. Users of these aircraft made 209,224 flights for a total duration of 351,580 flight hours.

Table 7 presents an overall summary of MMH/FH for those aircraft and user combinations to be included in the analysis. Data are reported in six month summaries covering calendar years 1974 and 1975. Table 8 shows the combinations of user, time period and aircraft data that are utilized in the analysis. Data were combined in two different ways to

TABLE 6

ANALYSIS OF VARIANCE BETWEEN THE 11 AIRCRAFT

DURING THE 6 MONTH TIME PERIODS

	1 to 2	1 to 3	1 to 4	2 to 3	2 to 4	3 to 4
Flight Control	S	S	S	S	S	S
Rotors	S	S	S	S	S	S
Engine Unit	S	S	S	S	S	S
Transmissions		S	S	S		S
Engine Install.	S	S	S	S	S	S

Time Periods: 1 - 1/74 to 6/74 2 - 7/74 to 12/74

3 - 1/75 to 6/75 4 - 7/75 to 12/75

S - significant variance

TABLE 7

DATA BASE SUMMARY

MMH/FH

SYSTEM / AIRCRAFT	FLT. CONT. MEAN *	FLT. CONT. MEAN **	FLT. CONT. STD. DEV. **	ROTOR MEAN *	ROTOR MEAN **	ROTOR STD. DEV. **	TRANS. MEAN *	TRANS. MEAN **	TRANS. STD. DEV. **	ENGINE MEAN *	ENGINE MEAN **	ENGINE STD. DEV. **	TOTAL 4 SYSTEMS MEAN *	TOTAL 4 SYSTEMS MEAN *	TOTAL 4 SYSTEMS STD. DEV. **
UH1E	.43	.43	.10	.75	.77	.25	.38	.38	.05	.51	.52	.13	2.08	2.10	.49
UH1N	.37	.40	.17	.41	.42	.24	.26	.23	.11	.95	1.05	.32	1.98	2.10	.61
SH3A	.27	.31	.15	.85	.91	.30	.61	.67	.49	1.01	1.04	.22	2.74	2.92	.87
SH3D	.17	.16	.02	.87	.88	.21	.49	.51	.18	.78	.79	.19	2.31	2.34	.45
SH3G	.20	.21	.06	1.01	1.01	.20	.75	.76	.16	1.05	1.11	.40	3.00	3.10	.68
SH3H	.10	.10	.01	.76	.75	.10	.44	.42	.12	.56	.58	.15	1.86	1.84	.30
SH2F	.43	.43	.09	.66	.65	.21	.67	.67	.20	1.17	1.16	.43	2.94	2.90	.64
CH46D	.65	.64	.16	1.19	1.20	.32	.80	.81	.18	1.07	1.09	.29	3.71	3.74	.67
CH46F	.50	.50	.08	1.43	1.42	.40	.66	.66	.10	1.11	1.13	.31	3.70	3.71	.73
CH53A	1.24	1.31	.49	1.76	1.81	.44	.85	.87	.11	1.49	1.53	.31	5.35	5.51	1.19
CH53D	.99	1.06	.31	2.10	2.24	.67	.90	.95	.30	.99	1.04	.36	4.98	5.28	1.43

*Equally weighted flying hours

**Equally weighted user periods

TABLE 8

MAINTENANCE DATA BASE USERS AND AIRCRAFT

INCLUDED IN ANALYSES

USER	CNAL				CNAP				FMF LANT				FMF PAC			
DATA PERIOD	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
UH1E													X	X	X	X
UH1N	X	X	X	X	X	X	X	X	X	X	X	X				
SH2F	X	X	X	X	X	X	X	X								
SH3A	X	X	X	X	X	X	X	X								
SH3D	X	X	X	X	X	X	X	X								
SH3G	X	X	X	X	X	X	X	X								
SH3H	X	X	X	X												
CH46D	X	X	X	X	X	X	X	X					X	X	X	X
CH46F									X	X	X	X	X	X	X	X
CH53A													X	X	X	X
CH53D									X	X	X	X	X	X	X	X

DATA PERIODS

1 - Jan. - June 1974

2 - July - Dec. 1974

3 - Jan. - June 1975

4 - July - Dec. 1975

create the summary in Table 7. A mean was computed by individually summing MMH and FH. These sums are then divided to obtain MMH/FH. The second mean was computed by summing MMH/FH and dividing by the number of data points.

Table 9 is an example presented to clarify the procedure used in the computation. Data was extracted from Appendix A for the rotor system of the SH3A. Table 8 indicates that 8 data points are available (4 from CNAP users and 4 from CNAL users). The total flying hours for these fleet users over two years is 15,828 and the total maintenance manhours is 13,450. Dividing these sums gives an overall MMH/FH of .85. The second mean is simply the sum of 8 MMH/FH observations divided by 8 (7.31 ÷ 8) giving a value of .91. The standard deviation of these observations is .3. Note that the former methodology gives each flying hour equal weight while the latter gives equal weight to each six month observation regardless of the flying hour content. The second mean and standard deviation were computed only to examine the variance inherent in the data base. All regression analyses were made using the mean value giving equal weight to each flying hour.

TABLE 9

SAMPLE CALCULATION

ROTOR (WUC 14XXX) SH3A AIRCRAFT

DATA PERIOD	CNAL MMH	CNAL FH	CNAL MMH/FH	CNAP MMH	CNAP FH	CNAP MMH/FH
1	1361	1071	1.27	1478	3001	.49
2	1365	1128	1.21	2168	3069	.71
3	1302	1321	.99	2981	2401	1.24
4	597	923	.65	2198	2914	.75

Mean (equally weighted flying hours)

TOTAL MMH = 13,450

TOTAL FH = 15,828

MEAN MMH/FH = .85

Mean (equally weighted user periods)

SUMMATION MMH/FH = 7.31

8 OBSERVATIONS

MEAN MMH/FH = .91

V. Aircraft System Characteristics

Another step in the study was the research of aircraft design characteristics that could be used as independent variables for regression analysis. Many factors were considered, but those selected for analysis and the value for each aircraft are given in Table 10. These data are self-explanatory except for the item, automatic flight controls indicator. This indicator denotes the degree of automatic flight control sophistication, as follows: 0 = no AFCS, 1 = autopilot only, 2 = sophisticated AFCS.

TABLE 10

AIRCRAFT DESIGN FACTORS

VARIABLE	UH1E	UH1N	SH3A	SH3D	SH3G	SH3H
No. of Engines	1	2	2	2	2	2
No. Main Rotors	1	1	1	1	1	1
No. Tail Rotors	1	1	1	1	1	1
Main Rotor Blades	2	2	5	5	5	5
Tail Rotor Blades	2	2	5	5	5	5
Total Engine Hp. megawatts (hp÷1000)	.82 (1.1)	1.34 (1.8)	1.86 (2.5)	2.09 (2.8)	1.86 (2.5)	2.09 (2.8)
Max Gross Weight megagrams (lbs.÷1000)	4.31 (9.5)	4.76 (10.5)	9.3 (20.5)	9.3 (20.5)	9.3 (20.5)	9.5 (21.0)
Gear Ratio ÷ 10	2.038	2.038	9.343	9.343	9.343	9.343
H.Power ÷ Weight $\frac{\text{WATTS}}{\text{GRAMS}}$ $\left(\frac{\text{hp.}}{\text{lbs.}}\right)$	.190 (.115)	.281 (.171)	.200 (.121)	.224 (.136)	.200 (.121)	.220 (.133)
Main Rotor Diameter meters (ft.)	13.4 (44.0)	14.7 (48.2)	18.9 (62.0)	18.9 (62.0)	18.9 (62.0)	18.9 (62.0)
Disc Loading $\frac{\text{kg.}}{\text{m}^2}$ $\left(\frac{\text{lbs.}}{\text{ft.}^2}\right)$	30.6 (6.2)	28.0 (5.8)	33.2 (6.8)	33.2 (6.8)	33.2 (6.8)	33.9 (7.0)
Automatic Flight Controls Indicator	0.	0.	2.	2.	2.	2.

TABLE 10 – Cont ued

AIRCRAFT DESIGN FACTORS

VARIABLE	SH2F	CH46D	CH46F	CH53A	CH53D
No. of Engines	2	2	2	2	2
No. Main Rotors	1	2	2	1	1
No. Tail Rotors	1	0	0	1	1
Main Rotor Blades	4	6	6	6	6
Tail Rotor Blades	4	0	0	4	4
Total Engine Hp. megawatts (hp ÷1000)	2.01 (2.7)	2.09 (2.8)	2.09 (2.8)	4.25 (5.7)	5.85 (7.85)
Max Gross Weight megagrams (lbs. ÷1000)	5.9 (13.0)	10.4 (23.0)	10.4 (23.0)	18.1 (40.0)	19.1 (42.0)
Gear Ratio ÷ 10	6.746	7.367	7.367	7.351	7.351
H.Power ÷ Weight $\frac{\text{WATTS}}{\text{GRAMS}}$ $\left(\frac{\text{hp.}}{\text{lbs.}}\right)$	.340 (.207)	.200 (.121)	.200 (.121)	.234 (.142)	.306 (.186)
Main Rotor Diameter meters (ft.)	13.4 (44.0)	15.5 (51.0)	15.5 (51.0)	22. (72.3)	22. (72.3)
Disc Loading $\frac{\text{kg.}}{\text{m}^2}$ $\left(\frac{\text{lbs.}}{\text{ft.}^2}\right)$	41.8 (8.5)	27.6 (5.6)	27.6 (5.6)	47.6 (9.8)	50.2 (10.3)
Automatic Flight Controls Indicator	1.5	1.	1.	1.	1.

VI. System Cost Equation Development

With the aircraft selected, their maintenance histories extracted, and physical characteristics known, it was possible to analyze these assembled data to develop maintenance cost estimating relationships (CER). The maintenance could then be analyzed relative to aircraft characteristics. Whenever a correlation between a maintenance variable and an aircraft characteristic was detected, the characteristic was selected as an independent variable for further analysis as one of several variables in stepwise regression analysis.

The stepwise regression program which was utilized, first selects the independent variable which has the highest correlation to the dependent variable, MMH/FH. It then proceeds to select the next independent variable which, of all the remaining variables, best reduces the total variance. This cost equation contains the independent variables. This process continues, one at a time, until no variable exists which can reduce the proportion of the total variance any further. For these analyses a 1-percent variance was used as the limit in all the analyses. The stepwise multiple regression program is from the IBM System/360 Scientific Subroutine Package Programmer's Manual, and the specific subroutine by this abbreviated Doolittle method is called STPRG.

Each resultant CER was subjected to three statistical tests. First, the correlation coefficient was examined. The correlation coefficient, when adjusted for the degrees of freedom, gives the percentage of variance in the dependent variable which is explained by the independent variables in the equation. The closer the correlation coefficient is to 1, the better the equation is statistically. The second test examines the F ratio which also considers the amount of variance explained by the independent variables. From the table of the F distribution, the 5 percent value of F is used for comparison with the specific F ratio under test. The test hypothesis is that there is no actual correlation between the dependent variable and the independent variables, and the apparent relationship is only due to chance. If the specific F ratio is greater than the 5 percent value of F, then the test hypothesis can be rejected with 95 percent confidence. The third test, the T ratios of the individual coefficients, is designed to determine if each coefficient makes a statistically significant contribution to the entire CER. These ratios are computed by dividing each independent variable's coefficient by its corresponding standard error. From the table of the T distribution, the 5 percent value of T is used for comparison with the specific T ratio under test. The test hypothesis is that the independent variable has no effect on the dependent variable (i.e., the independent variable's coefficient could be zero) and the apparent relationship is due to chance.

If the specific T ratio is greater than the 5 percent value of T, then the test hypothesis can be rejected with 95 percent confidence.

Flight Control System

Figures 2 - 5 are the plots of MMH/FH versus each of the four aircraft characteristics which comprise the maintenance equation shown in Figure 6. The two main factors which affect maintenance hours are the average flight duration and the flights per aircraft per month. Both coefficients are negative and numerically reduce the large positive constant, 3.8895, to the under 1.0 value of the flight control's MMH/FH. Although both the correlation coefficient, 0.955, and the computed F value, 22.636, are highly satisfactory, there is considerable variation between the computed estimates and the actual MMH/FH values as shown by Figures 7 and 8. This results in part from the large variance in actual data (varying from 0.10 to over twelve times greater, 1.24).

The SH3 series contain very sophisticated automatic flight controls and each aircraft has a very low MMH/FH value. This variable appears to be very significant in reducing the maintenance, however the regression program chose not to select this variable.

Rotor System

The maintenance equation developed for the rotor system is shown in Figure 11. The correlation coefficient of .966 and the equation's F-ratio value, which exceeds the 95% critical value, assures us that the two independent variables, weight and main rotor diameter, significantly explain the MMH/FH. Each coefficient also easily passes the T test. Overall, this equation has the best statistical test values of any of the 5 equations developed. High correlation of MMH/FH with rotor diameter and with weight can also be observed in the plots of these respective variables in Figures 9 and 10.

The comparisons of the estimates for MMH/FH from the equation to the actual MMH/FH values (Figure 12) indicates a higher percentage error than would be anticipated. A closer examination of the actual MMH/FH data in Figures 9 and 10 shows that there is considerable variation within each of the three aircraft type groupings. Also, it should be noted that the MMH/FH for the different aircraft varies from .41 to 2.10 which is the greatest range of values for any of the subsystems. Figure 13 presents error in the estimate in terms of basic data standard deviations. Errors in the estimate are comparable with the spread in the data. Taking all of these factors into consideration, the developed equation is a good predictor of rotor maintenance manhours.

Engine System

The engine system as defined in this study is a combination of the engine and the engine installation. The maintenance equation of Figure 19 should give good estimates, for the final correlation coefficient is .934 and the equation's F value which surpasses the 95% critical value is 12.14. In developing the equation, the first three variables selected by the regression technique were number of engines, average flight duration, and flights per aircraft per month. These independent variables have T values for their coefficients which are statistically significant in their overall contribution to the equation's final answer. The final two variables, horsepower and aircraft weight, are strongly correlated to each other and with both used, each make only minor contributions to the final estimates. The plots of MMH/FH versus each of the above three variables are shown in Figures 14, 15 and 16. When considered individually, none of these variables seem to be strongly correlated to the dependent variable, the best has only a correlation of 0.5. The weight and horsepower variables, shown in Figures 17 and 18, actually show better correlation to each other than to MMH/FH. The equation with five variables gives consistently satisfactory MMH/FH estimates as shown in Figures 20 and 21.

Transmission System

The four independent variables, aircraft weight, transmission gear ratio, average flight duration, and flights per month, were selected as best to relate the maintenance of the transmission system. The relationships between each of these variables and MMH/FH are shown in Figures 22 - 25, respectively. Figure 26 gives the maintenance equation and shows that the weight coefficient is .0021 and the flights per month coefficient is .0324. Both of the coefficients of these variables fail the T test. Coefficients for the variables of gear ratio and average flight duration both pass the T test. The equation as a whole passes the F test, and the correlation coefficient is .923. From Figures 27 and 28, it can be seen that only the estimates for the UH1E and UH1N aircraft are very far from the actual MMH/FH values; thus estimates based on this equation should give reasonable results.

Total Dynamic System

The final analysis involved the combined total MMH/FH of the four systems in the dynamic train: flight controls, rotors, transmission and engines. The dynamic system's predictor equation which resulted is shown in Figure 32. The three independent variables selected for the regression

analysis were weight, rotor diameter and flights per month. The estimating equation has a correlation coefficient of .951 and a F ratio of 28.299 which easily exceeds the 95% F value. The tests indicate that the independent variables in the equation significantly explain the MMH/FH. The relationship of these factors to MMH/FH is shown in Figures 29, 30 and 31. The variable selection process of the regression program picked weight first and rotor diameter second. With only these two variables, the equation was already indicated to be a good predictor with a correlation coefficient over .900 and the T values indicated the coefficients for these variables to be statistically valid. The third independent variable, flights per month, added little to the maintenance equation, as its T value fails to assure statistically that this variable makes a significant contribution. In order to follow a uniform procedure for selecting the coefficients for each equation, the third variable was allowed to remain in the equation as shown.

The graphs (Figures 32 - 35) comparing the relationship of each of the four independent variables to MMH/FH show varying degrees of correlation. The best singular predictor of MMH/FH is aircraft weight. Usually the best predictor independent variable is obvious. However, the order of which the remaining variables are introduced into the regression equation is

difficult to predict for one with a lesser correlation to MMH/FH than some other variable is often picked. This is the case between horsepower and gross weight, horsepower is not entered into the regression equation while other less obvious variables are entered. The reason is that horsepower is strongly correlated (better than 0.90) to aircraft weight. Thus any contribution the horsepower variable would have to the goodness of fit has already been contributed to the equation by the inclusion of aircraft weight, and horsepower will have a minimal contribution statistically. For this equation it can essentially be omitted.

As can be seen in Figure 34, in only three cases did the residual's percentage error exceed ten percent. The three aircraft which deviated the most were from the very similar SH3 series. These aircraft, although similar in design factors, have very dissimilar MMH/FH data. This will be explored in more depth in Section VII. For the remaining aircraft, the maintenance estimating equation's estimates are all very close to the actual MMH/FH. If the data for all the SH3 aircraft were averaged to represent one aircraft, its MMH/FH would have been closely approximated by the final equation. Figure 35 presents estimate errors plotted in terms of the standard deviation in basic data.

The data of Table 11 lists the results for estimating the total MMH/FH for the dynamic system by two ways. Totals can be obtained

TABLE 11

A COMPARISON OF TWO METHODS TO ESTIMATE THE TOTAL MMH/FH

FOR THE DYNAMIC SYSTEM

	UH1E	UH1N	SH3A	SH3D	SH3G	SH3H	SH2F	CH46D	CH46F	CH53A	CH53D
Flight Control Estimate	.34	.48	.23	.22	.32	.06	.34	.55	.62	1.17	1.02
Rotors Estimate	.57	.53	.85	.85	.85	.88	.80	1.28	1.28	1.87	2.02
Engine Estimate	.51	1.09	.91	.85	1.06	.61	1.05	1.00	1.09	1.52	.99
Transmission Estimate	.28	.38	.56	.54	.72	.48	.61	.78	.74	.87	.85
Sum of Above Estimates	1.70	2.48	2.55	2.46	2.95	2.03	2.80	3.61	3.73	5.43	4.88
Dynamic System Estimate	2.07	1.78	2.58	2.60	2.45	2.53	2.94	3.68	3.85	5.02	5.15
Actual Total	2.08	1.98	2.74	2.31	3.00	1.86	2.94	3.71	3.70	5.35	4.98

by summing the results of individual system cost relationships or by using the relationship for the total dynamic system. These results are shown as bar graphs in Figure 36. Statistically comparing the maintenance estimating equations by computing the variance of each group of estimates implies that the sum of the individual estimates gives a slightly better answer than the estimate of the whole dynamic system. However, closer inspection of each estimate shows the majority of the variance in the estimate of the whole dynamic system is contributed by two aircraft types, SH3G and SH3H. Eliminating these two aircraft types, the estimate of the total dynamic system gives a better set of answers. In either case, statistically similar results are obtained and to say either is decidedly better would be incorrect.

FLIGHT CONTROL

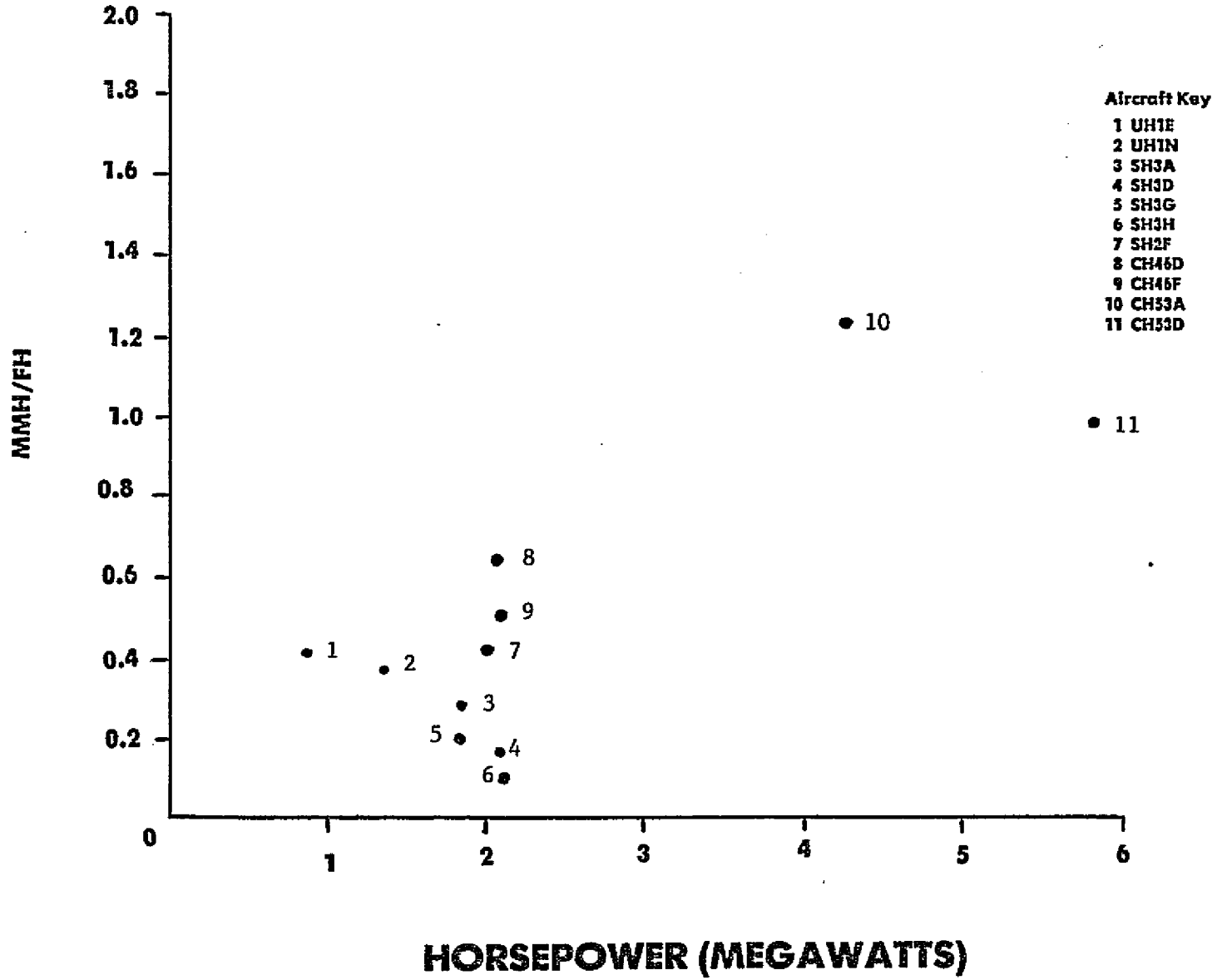
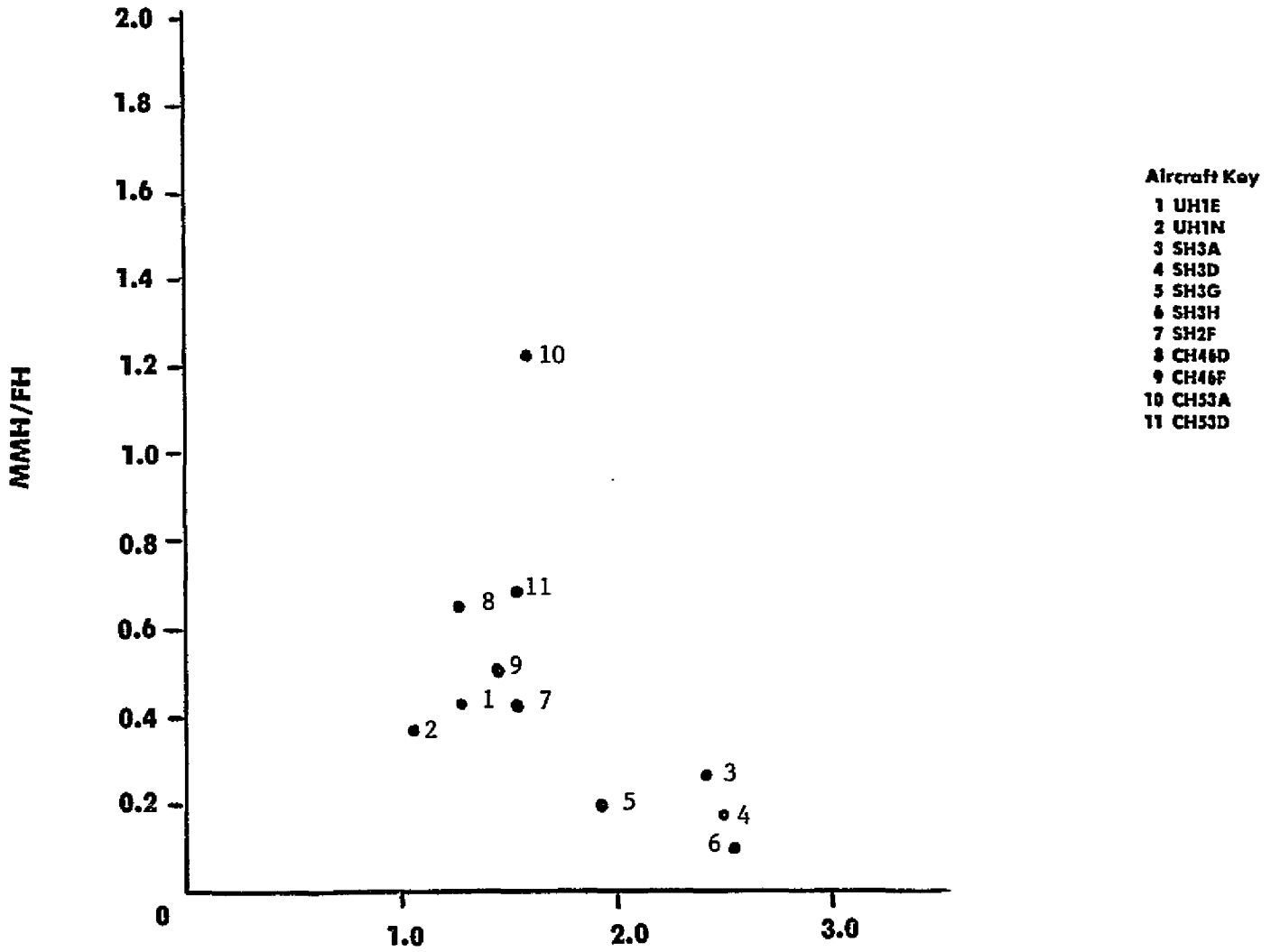


FIGURE 2

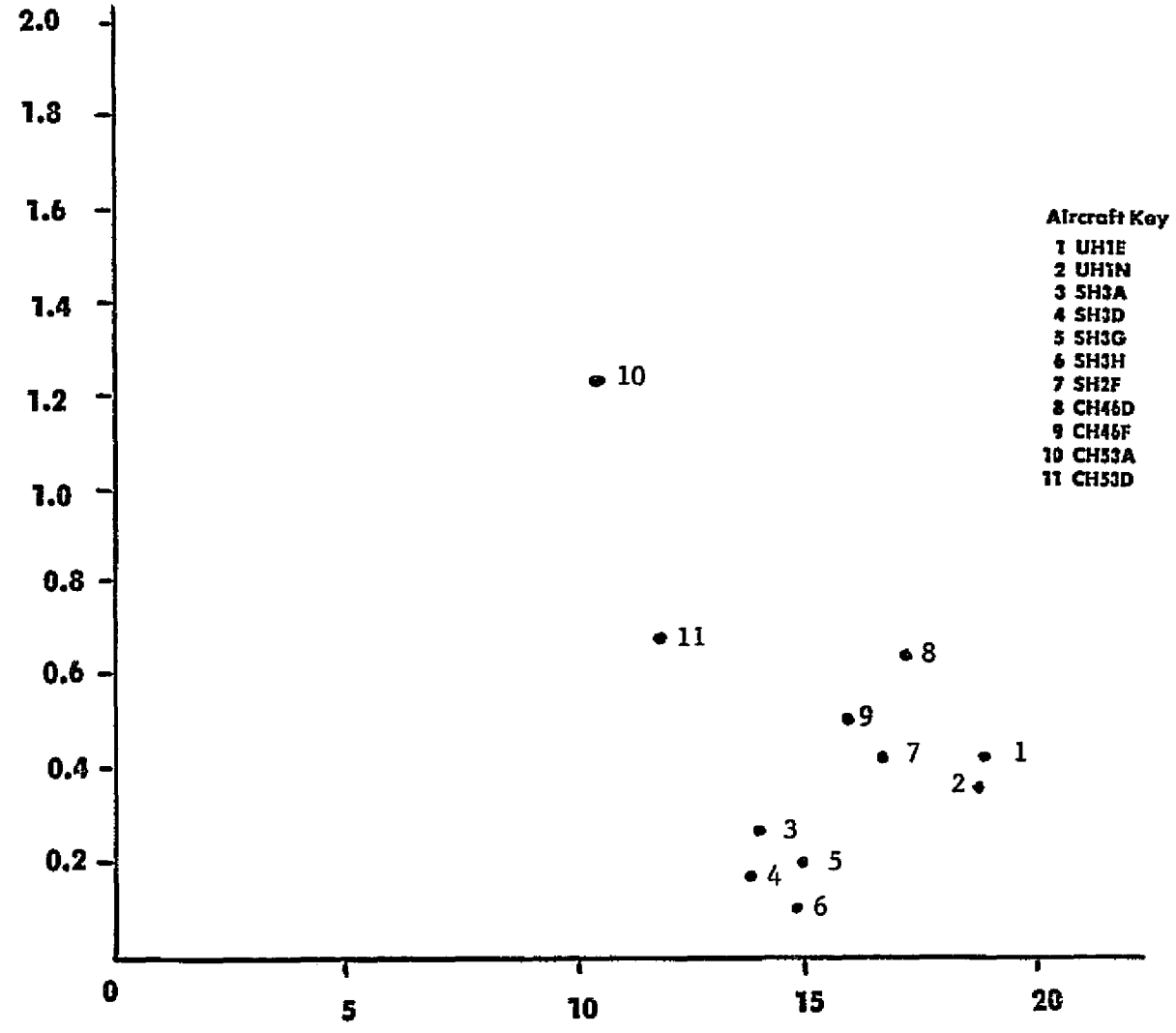
FLIGHT CONTROL



FLIGHT DURATION (HOURS)

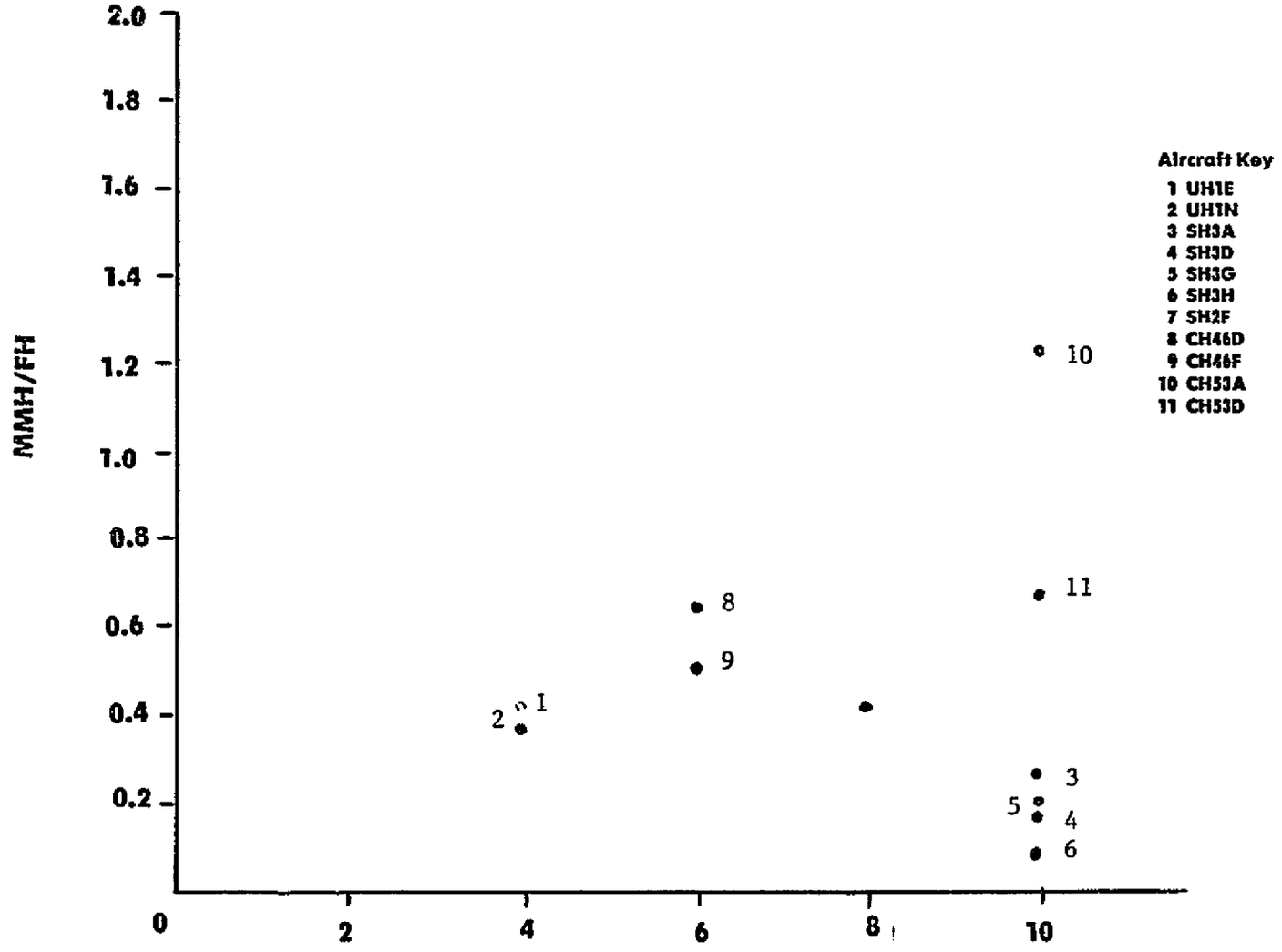
FIGURE 3

FLIGHT CONTROL



FLIGHTS PER MONTH

FIGURE 4



NUMBER OF ROTOR BLADES

FIGURE 5

MAINTENANCE EQUATION

FLIGHT CONTROL SYSTEM

$$MMH/FH = .02124H - .46127F - .14422M - .05581B + 3.88951$$

WHERE: H = TOTAL HORSEPOWER IN MEGAWATTS
F = AVERAGE FLIGHT DURATION
M = FLIGHTS PER AIRCRAFT PER MONTH
B = TOTAL NUMBER OF ROTOR BLADES

CORRELATION COEFFICIENT = .955

		MODEL	95% CRITICAL VALUE
F-VALUE		22.636	4.53
T-VALUE	(H)	0.337	1.94
	(F)	2.737	1.94
	(M)	3.448	1.94
	(B)	1.185	1.94

FIGURE 6

ERROR IN ESTIMATE IN PERCENT OF MMH/FH KNOWN VALUE

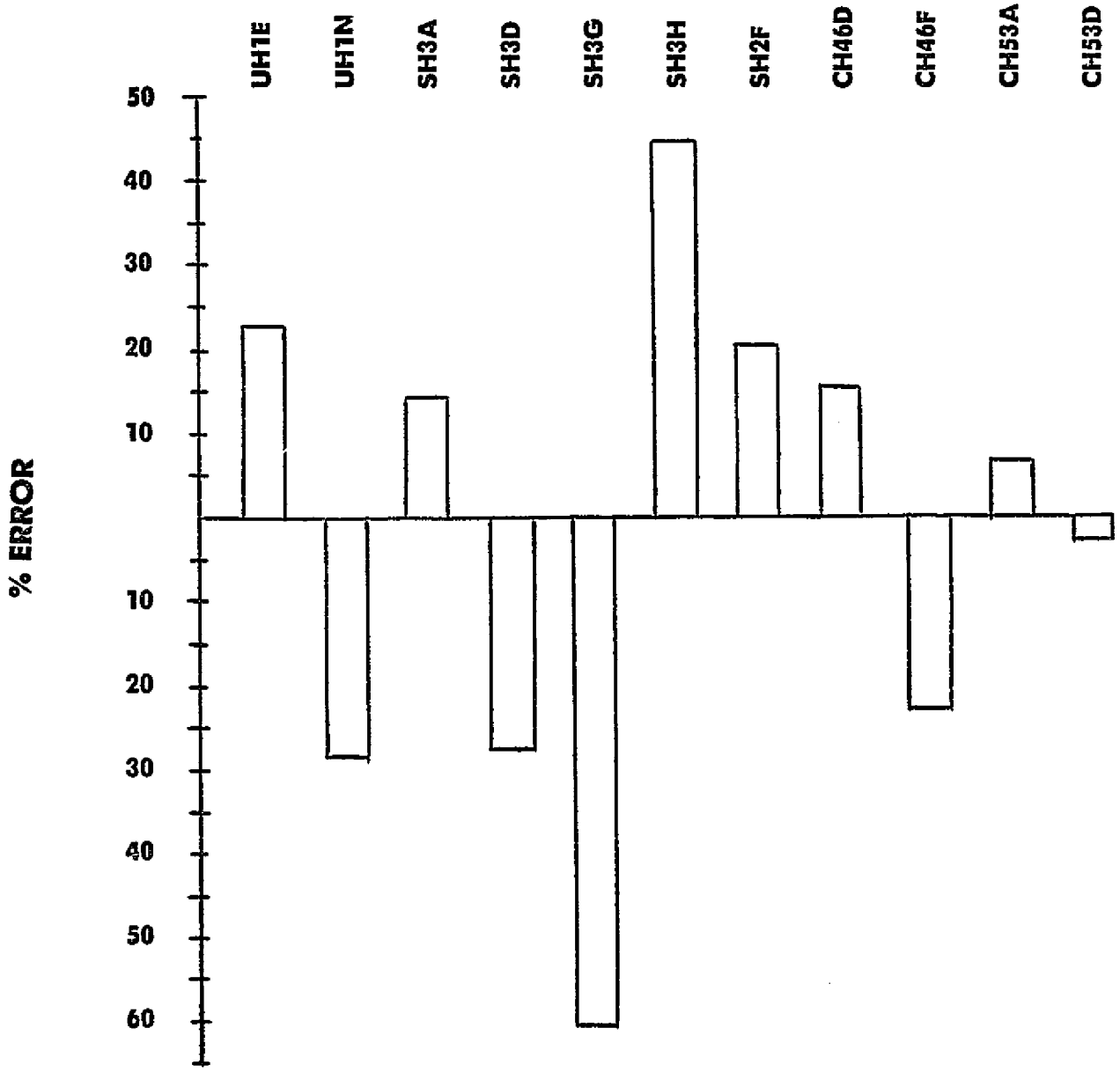


FIGURE 7

FLIGHT CONTROL

ERROR IN ESTIMATE OF MMH/FH IN TERMS OF DATA VARIANCE

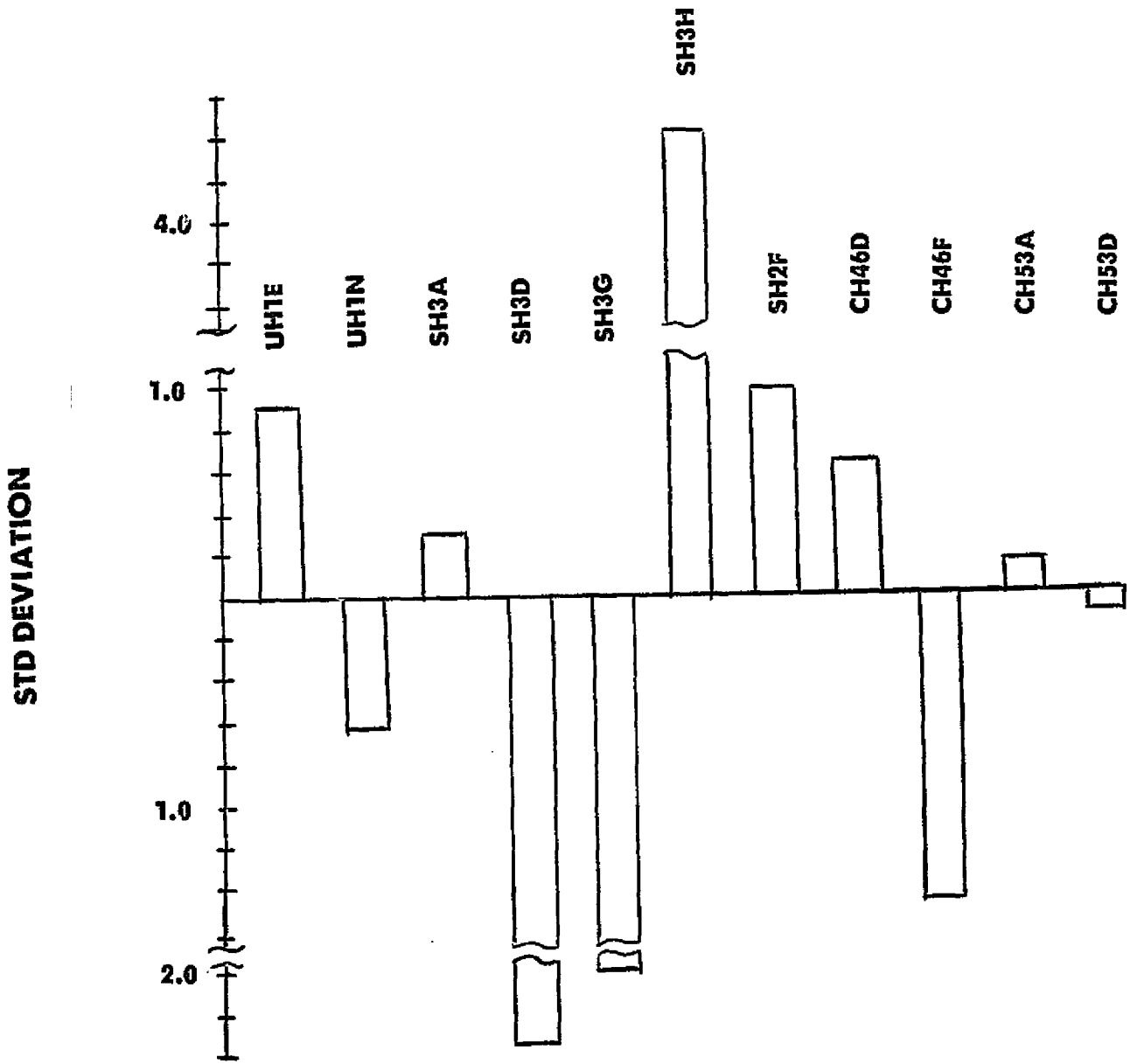
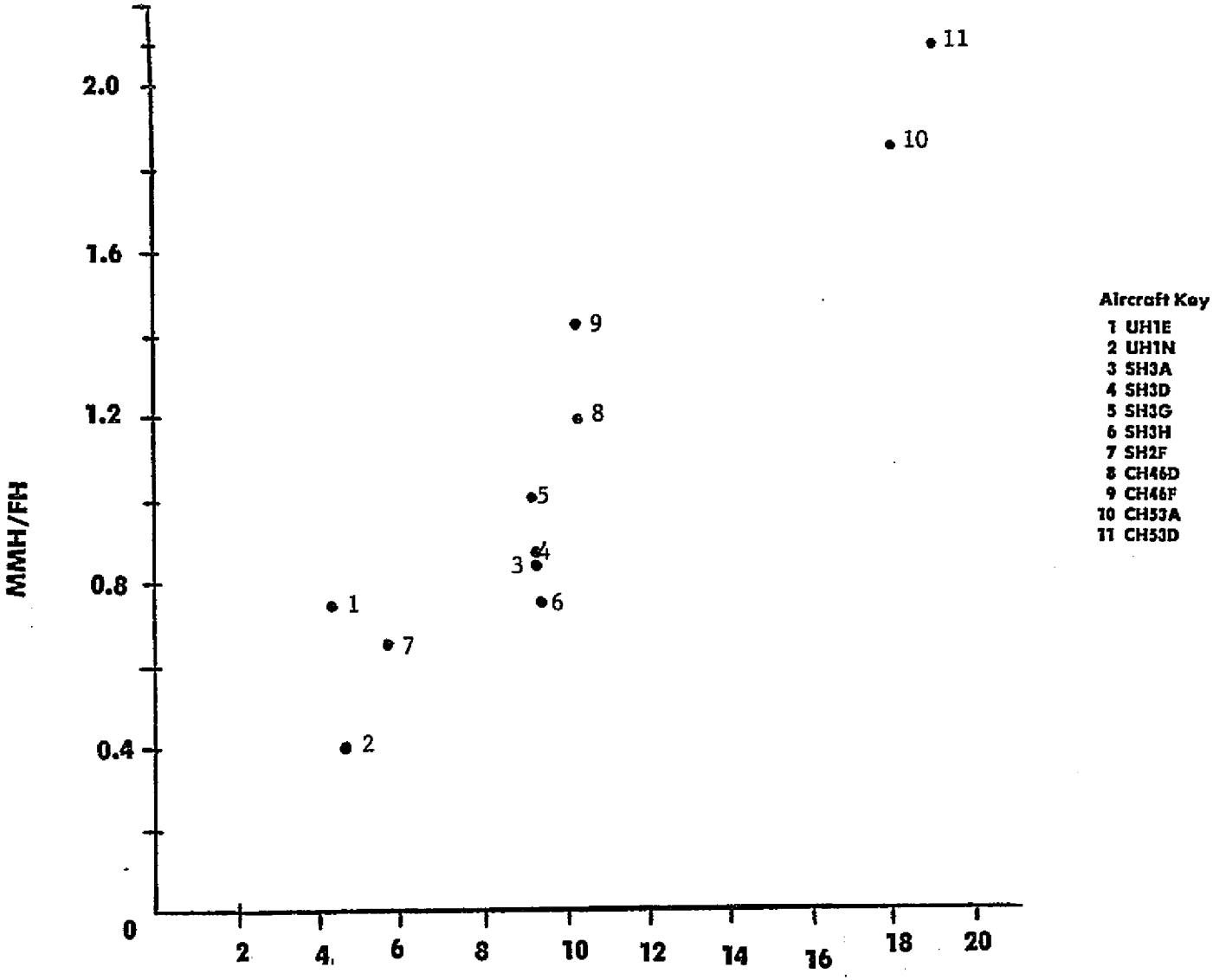


FIGURE 8

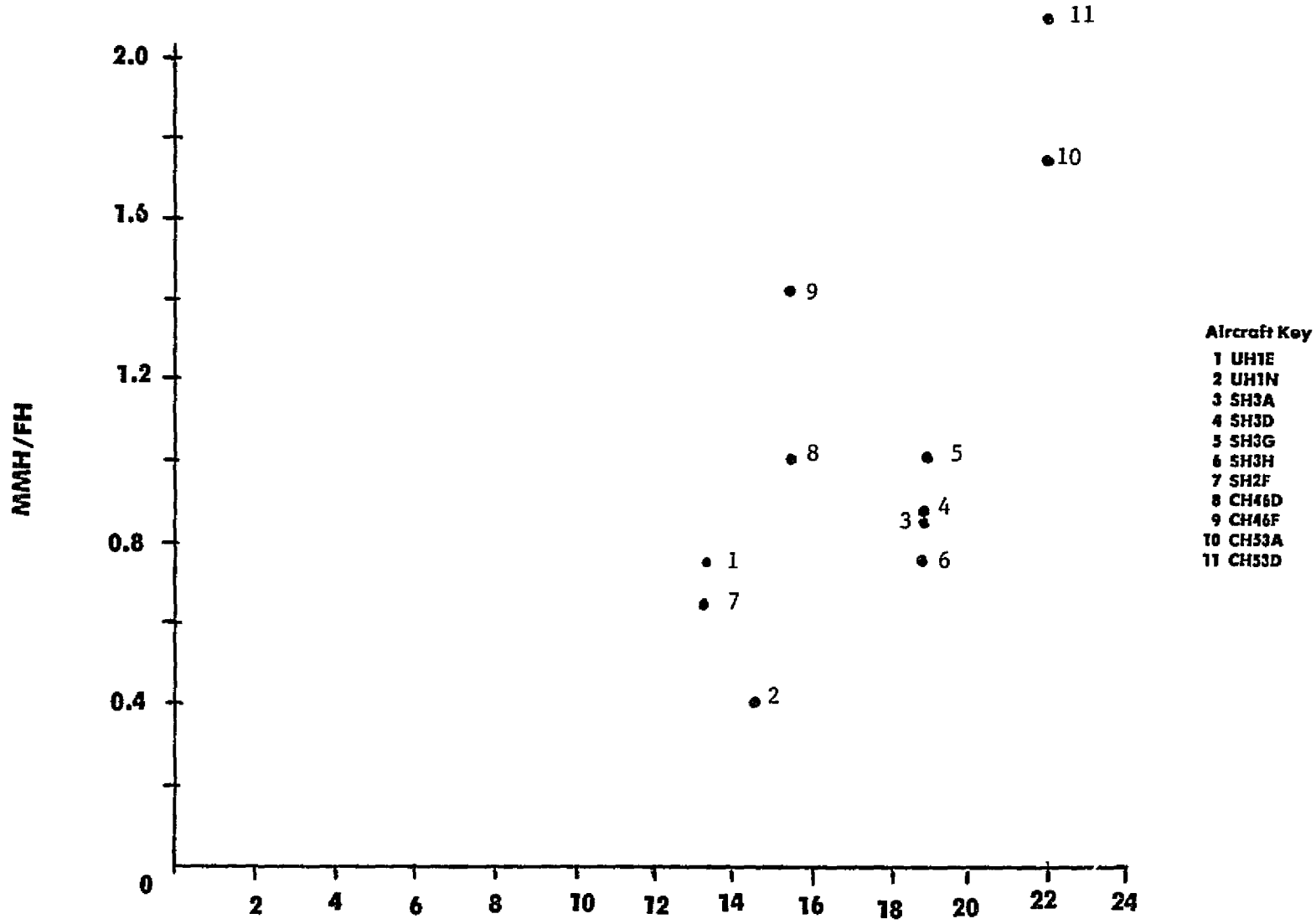
ROTORS



WEIGHT (MEGAGRAMS)

FIGURE 9

ROTORS



MAIN ROTOR DIAMETER (METERS)

FIGURE 10

MAINTENANCE EQUATION

ROTOR SYSTEM

$$MMH/FH = .1439W - .07933D + 1.01333$$

WHERE: W = MAXIMUM WEIGHT IN MEGAGRAMS

D = MAIN ROTOR DIAMETER IN METERS

CORRELATION COEFFICIENT = .966

	MODEL	95% CRITICAL VALUE
F-VALUE	61.76	4.46
T-VALUE (W)	8.11	1.86
(D)	2.93	1.86

FIGURE 11

ROTOR SYSTEM

ERROR IN ESTIMATE IN PERCENT OF MMH/FH KNOWN VALUE

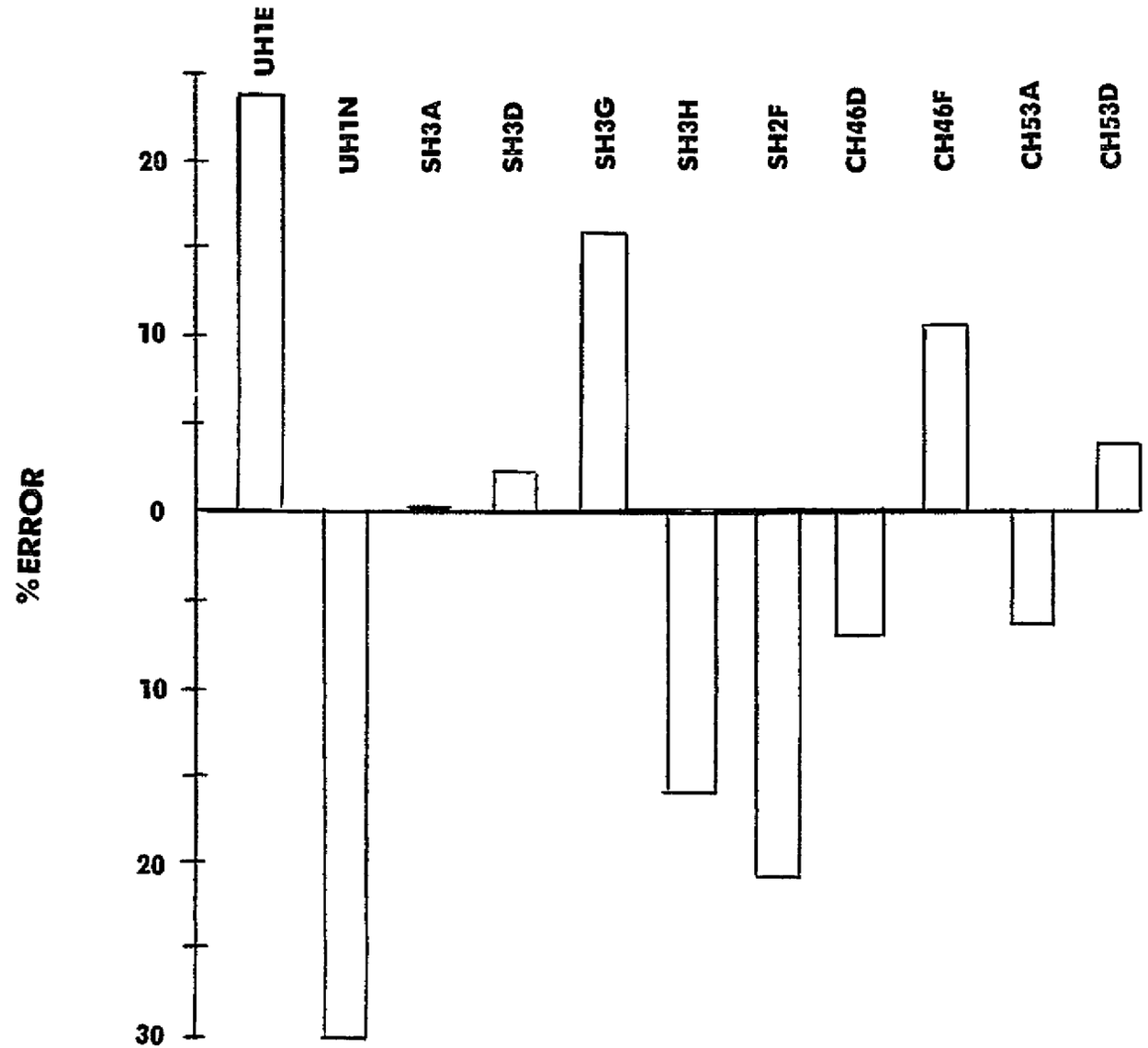


FIGURE 12

ROTOR SYSTEM

ERROR IN ESTIMATE OF MMH/FH IN TERMS OF DATA VARIANCE

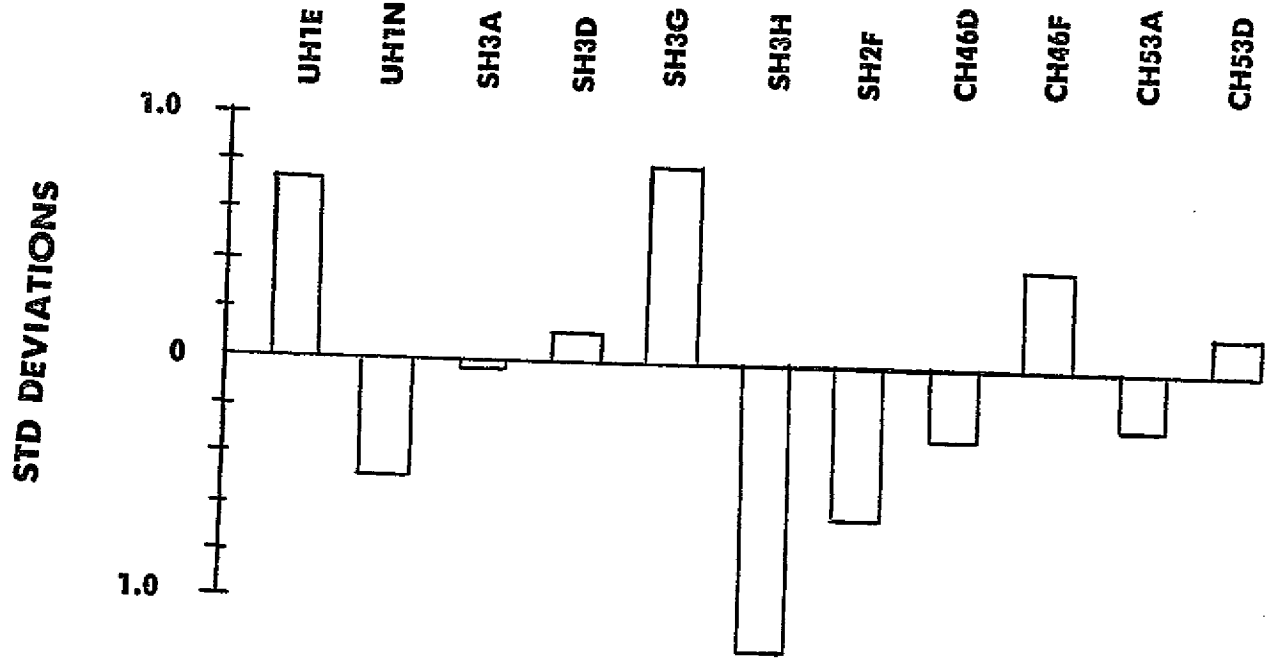
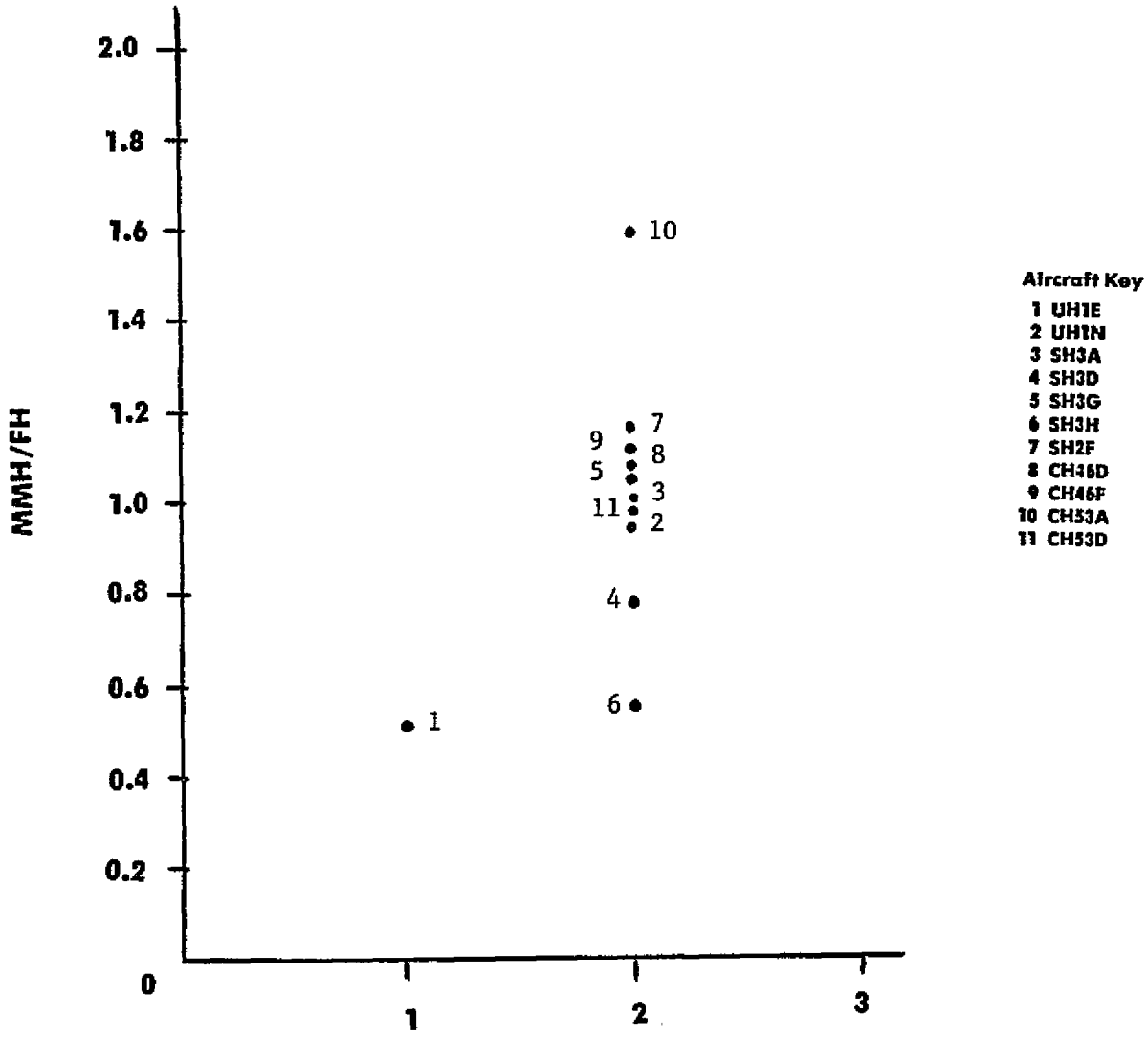


FIGURE 13

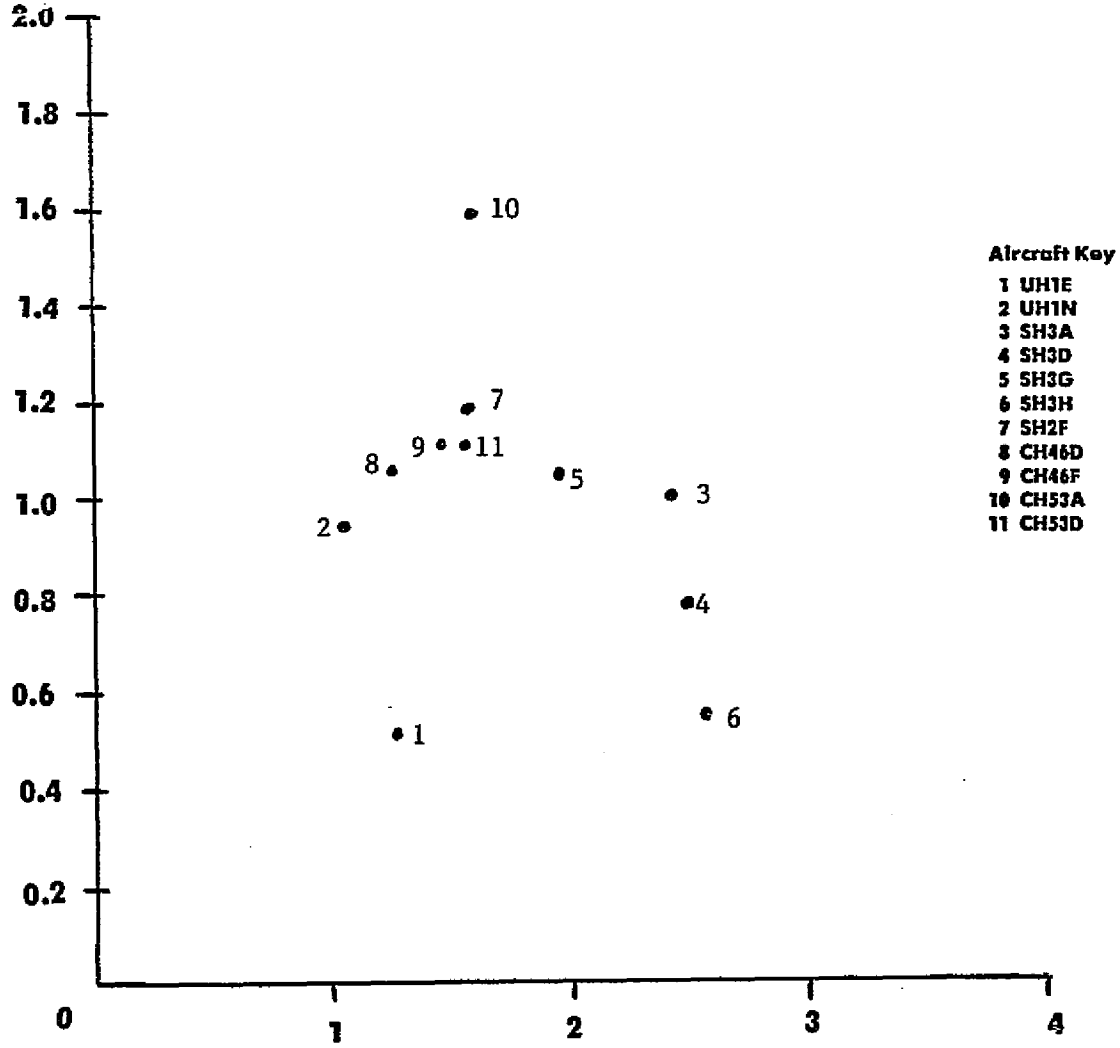
ENGINE SYSTEM



NUMBER OF ENGINES

FIGURE 14

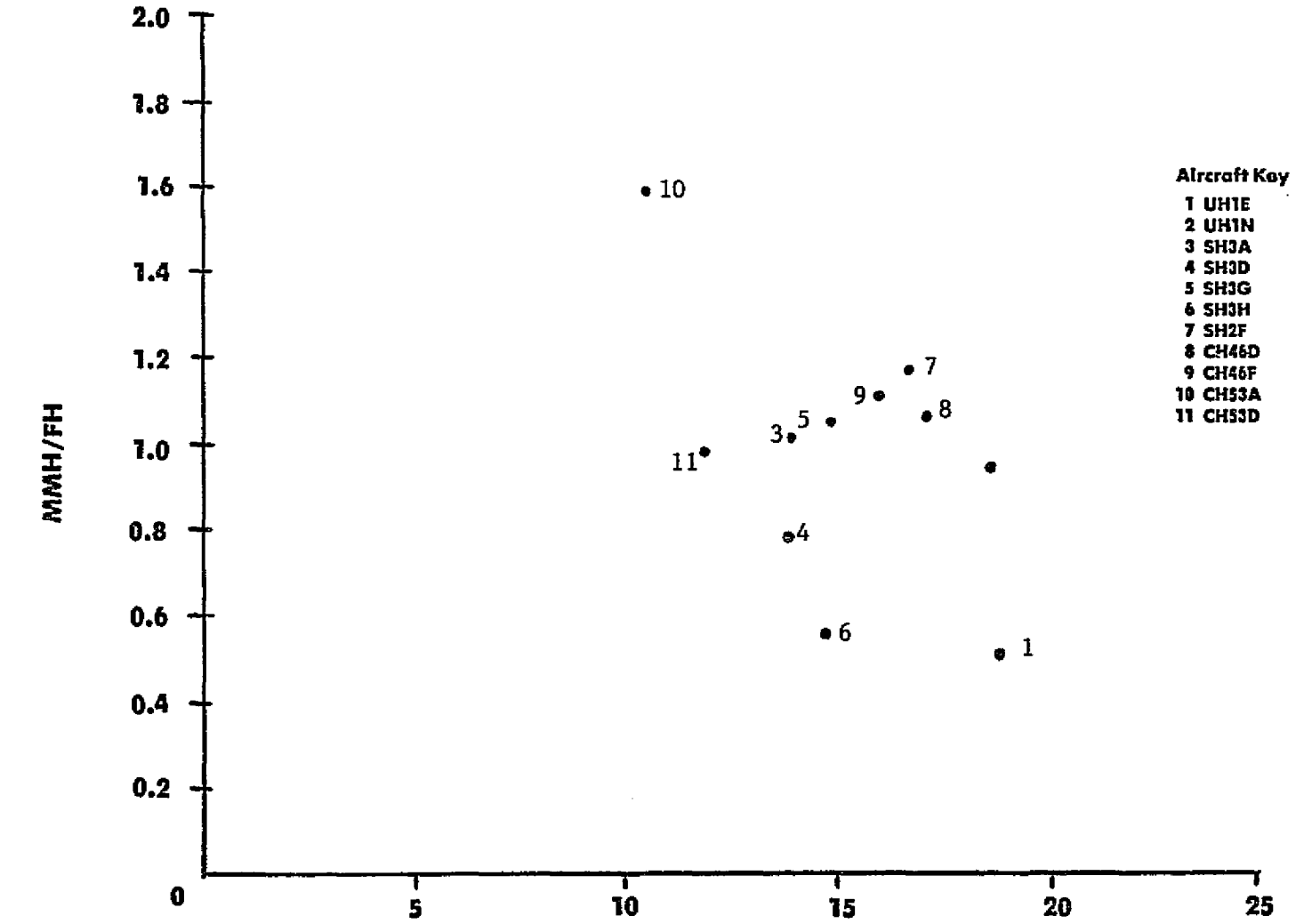
ENGINE SYSTEM



FLIGHT DURATIONS (HOURS)

FIGURE 15

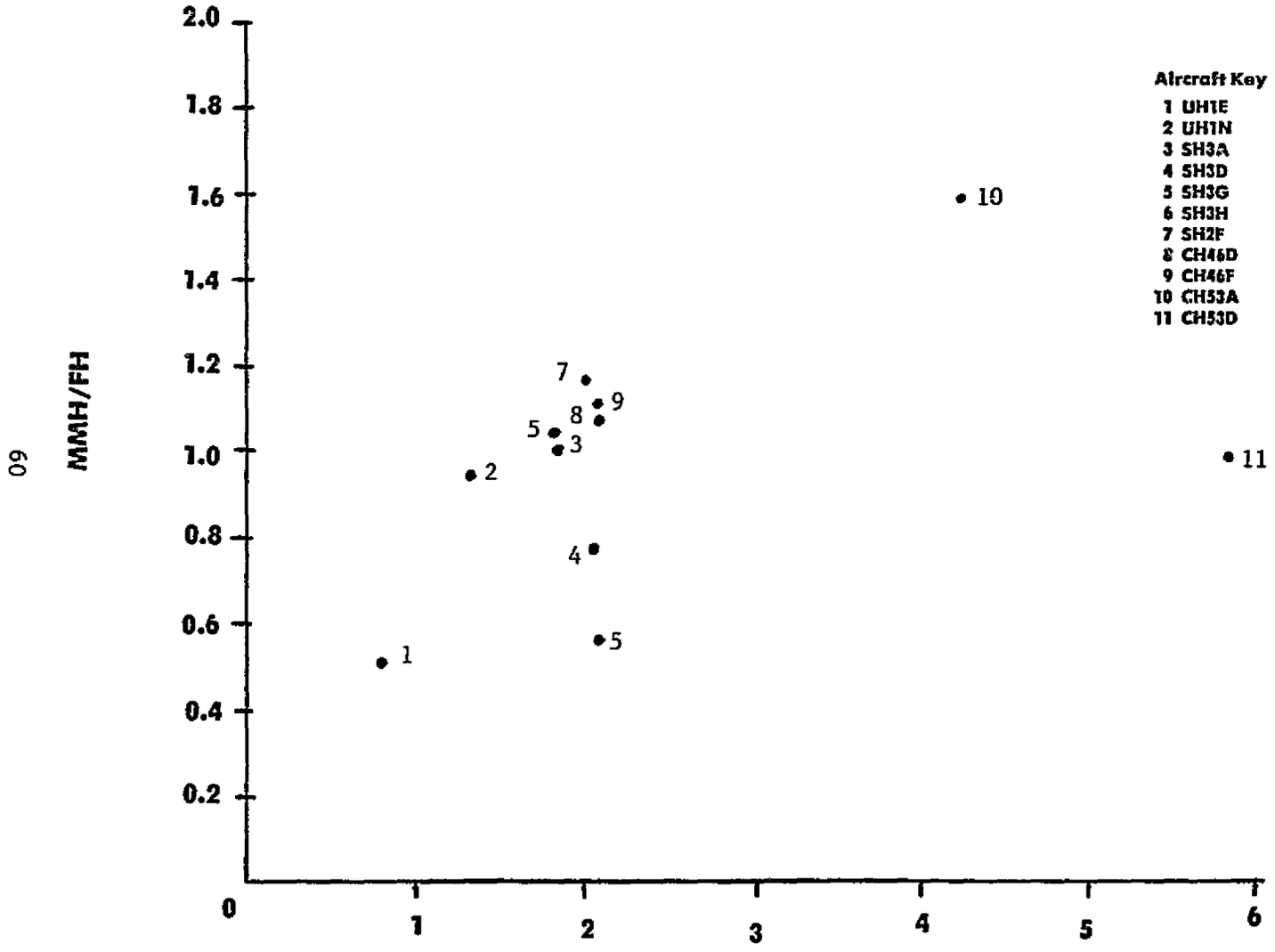
ENGINE SYSTEM



FLIGHTS PER MONTH

FIGURE 16

ENGINE SYSTEM



HORSEPOWER (MEGAWATTS)

FIGURE 17

ENGINE SYSTEM

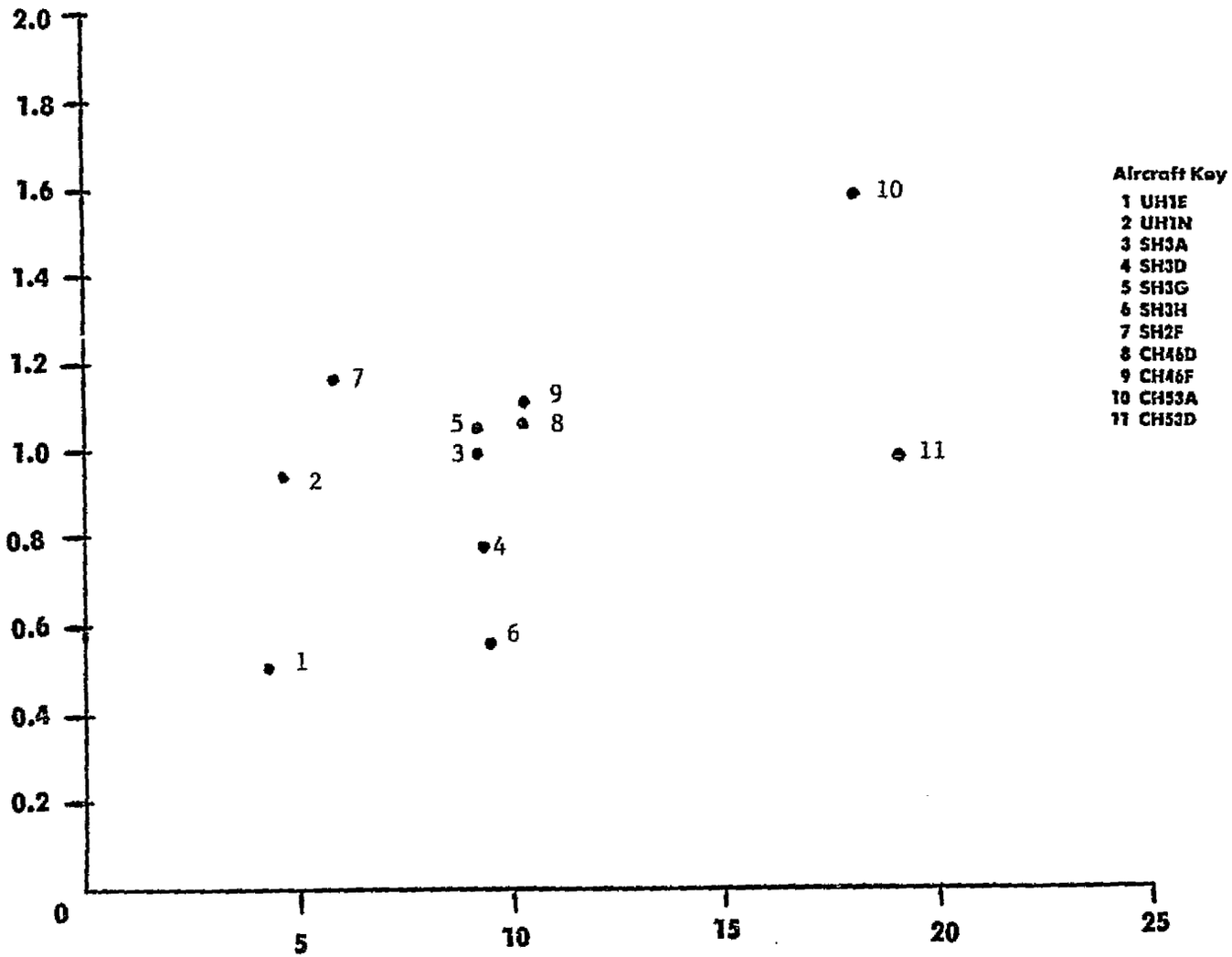


FIGURE 18

MAINTENANCE EQUATION

ENGINE SYSTEM

$$MMH/FH = .48668N - .69131F - .20819M - .14598H - .03940W + 5.17397$$

WHERE: N = NUMBER OF ENGINES
F = AVERAGE FLIGHT DURATION
M = FLIGHTS PER AIRCRAFT PER MONTH
H = TOTAL HORSEPOWER IN MEGAWATTS
W = MAXIMUM WEIGHT IN MEGAGRAMS

CORRELATION COEFFICIENT = .934

		MODEL	95% CRITICAL VALUE
F-VALUE		12.14	5.05
T-VALUE	N	3.80	2.02
	F	5.77	2.02
	M	4.20	2.02
	H	1.99	2.02
	W	1.26	2.02

FIGURE 19

ENGINE

ERROR IN ESTIMATE IN PERCENT OF MMH/FH KNOWN VALUE

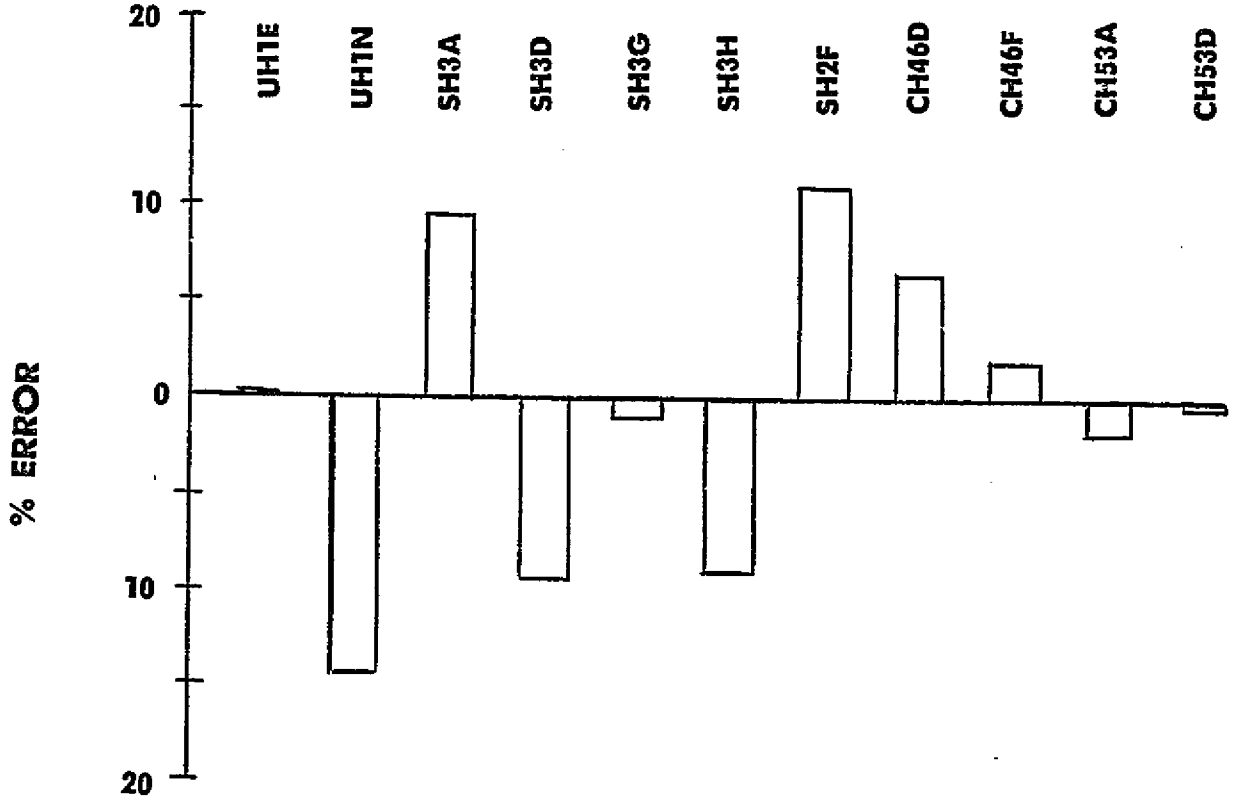


FIGURE 20

ENGINE

ERROR IN ESTIMATE OF MMH/FH IN TERMS OF DATA VARIANCE

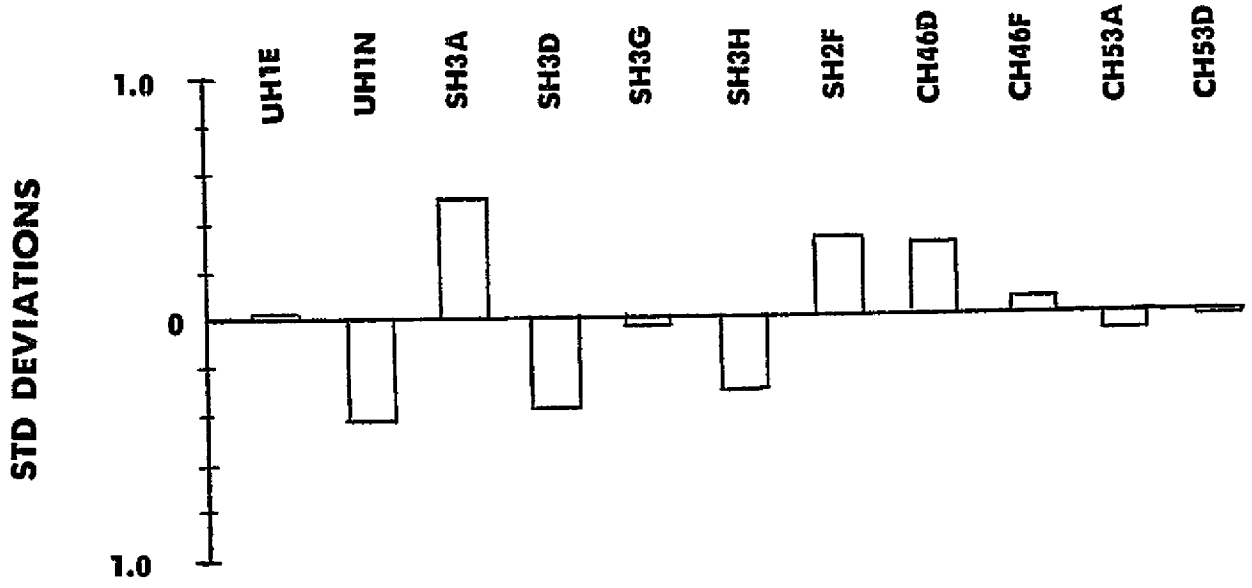


FIGURE 21

TRANSMISSION

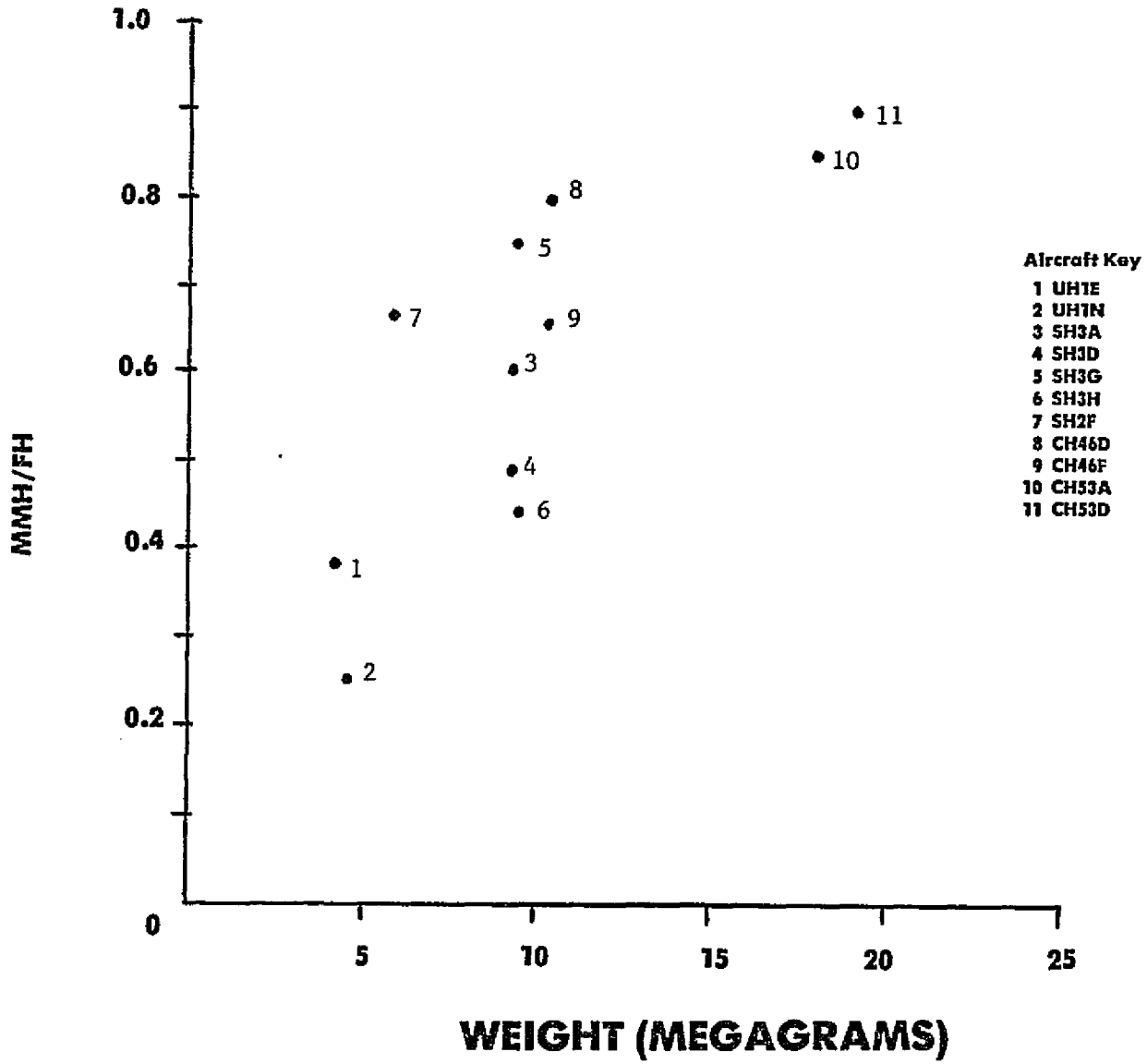


FIGURE 22

TRANSMISSION

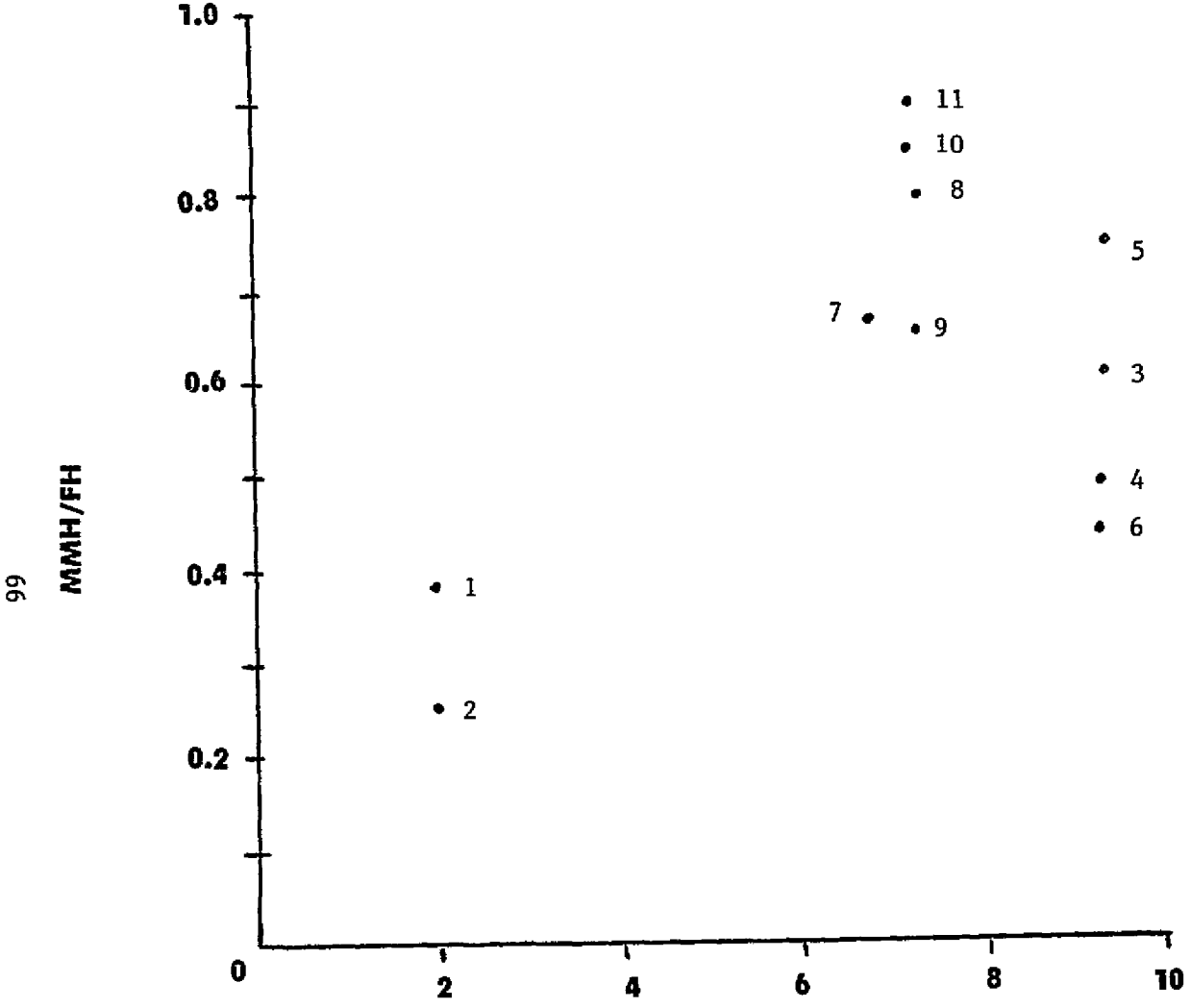
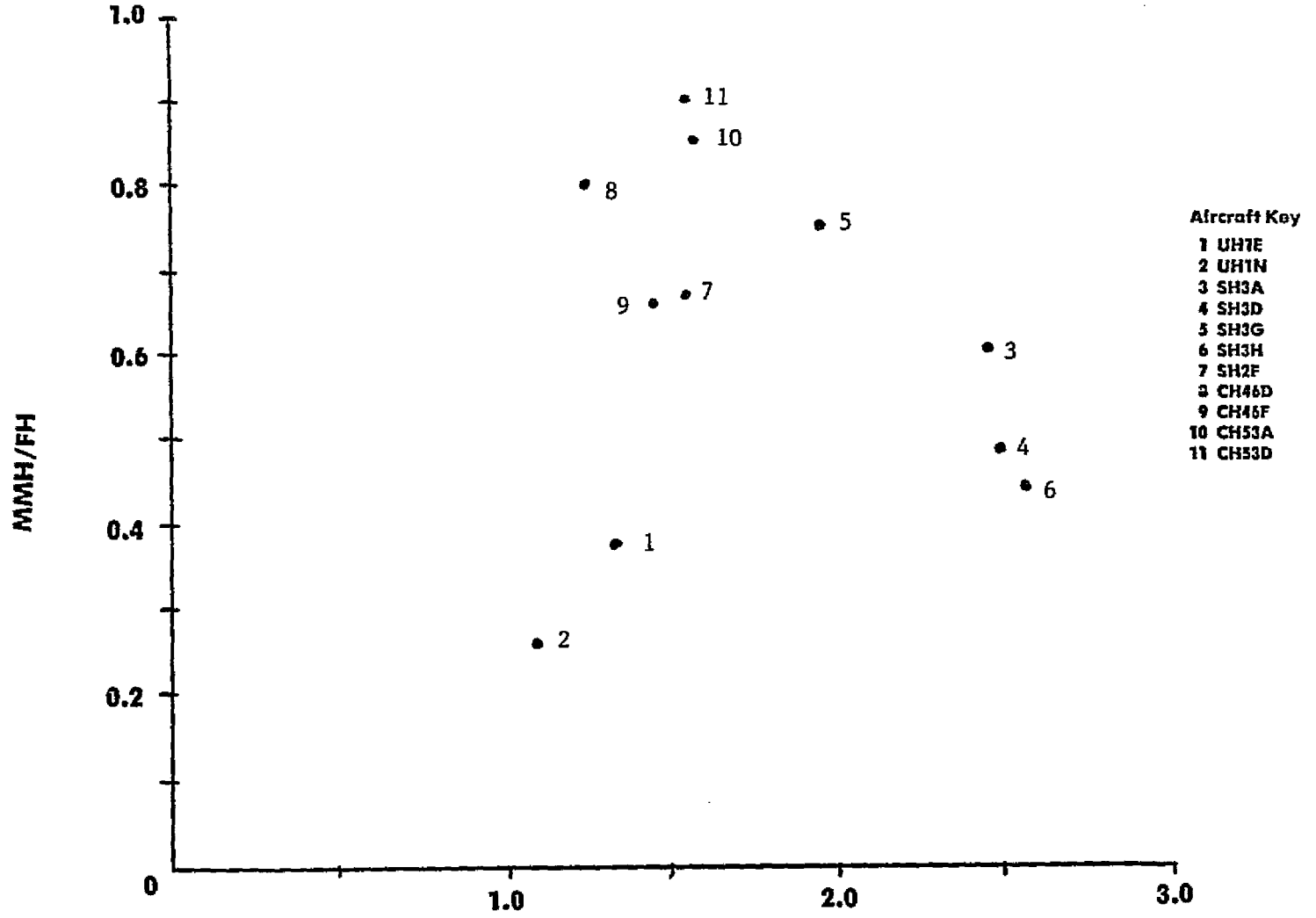


FIGURE 23

TRANSMISSION



FLIGHT DURATION (HOURS)

FIGURE 24

TRANSMISSION

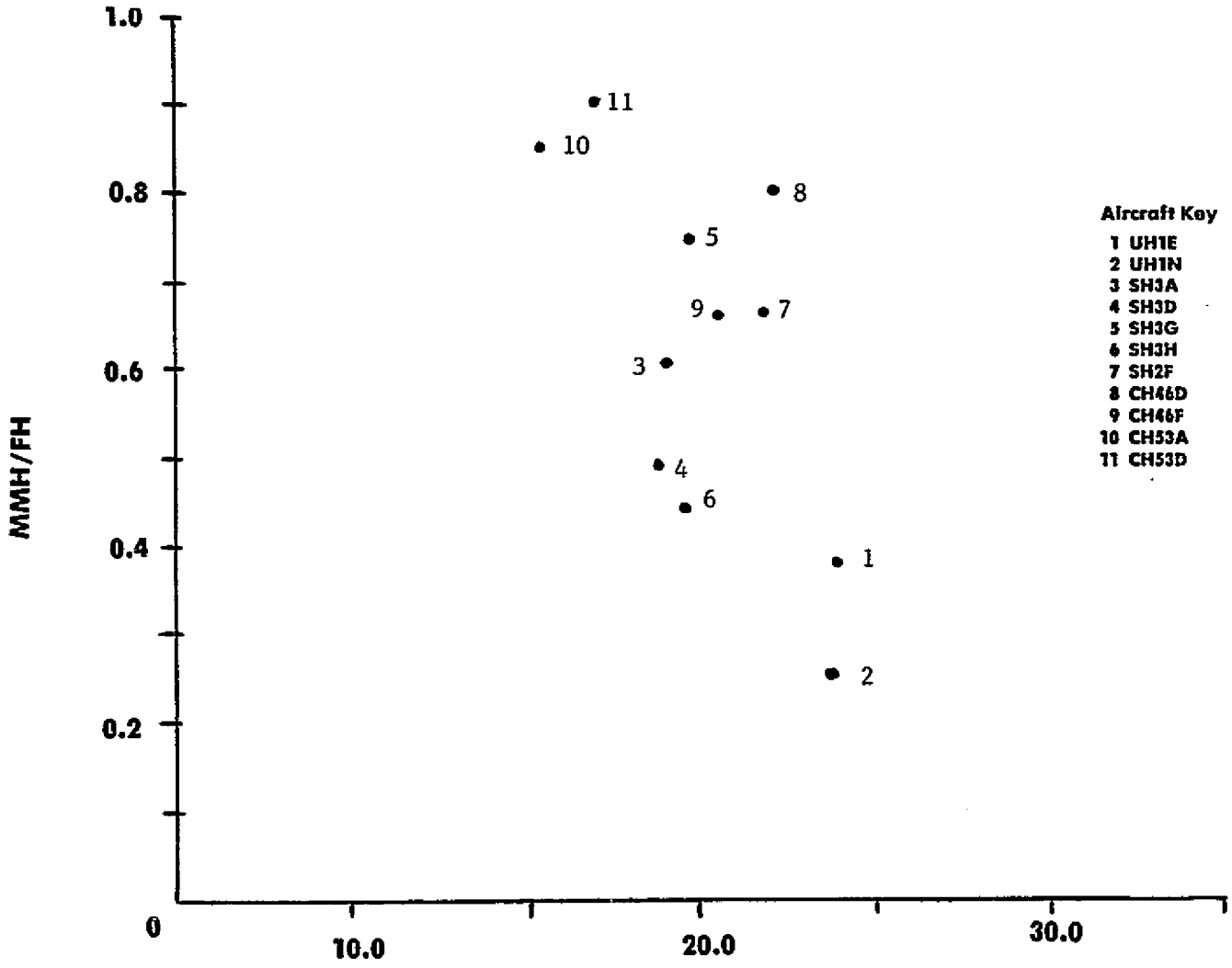


FIGURE 25

MAINTENANCE EQUATION

TRANSMISSION SYSTEM

$$MMH/FH = .0021W + .07559G - .39997F - .03247M + 1.26165$$

WHERE: W = MAXIMUM WEIGHT IN MEGAGRAMS
G = TRANSMISSION GEAR RATIO
F = AVERAGE FLIGHT DURATION
M = FLIGHTS PER AIRCRAFT PER MONTH

CORRELATION COEFFICIENT = .923

		MODEL	95% CRITICAL VALUE
F-VALUE		13.06	4.53
T-VALUE	W	.103	1.94
	G	3.93	1.94
	F	3.26	1.94
	M	.827	1.94

FIGURE 26

TRANSMISSIONS

ERROR IN ESTIMATE IN PERCENT OF MMH/FH KNOWN VALUE

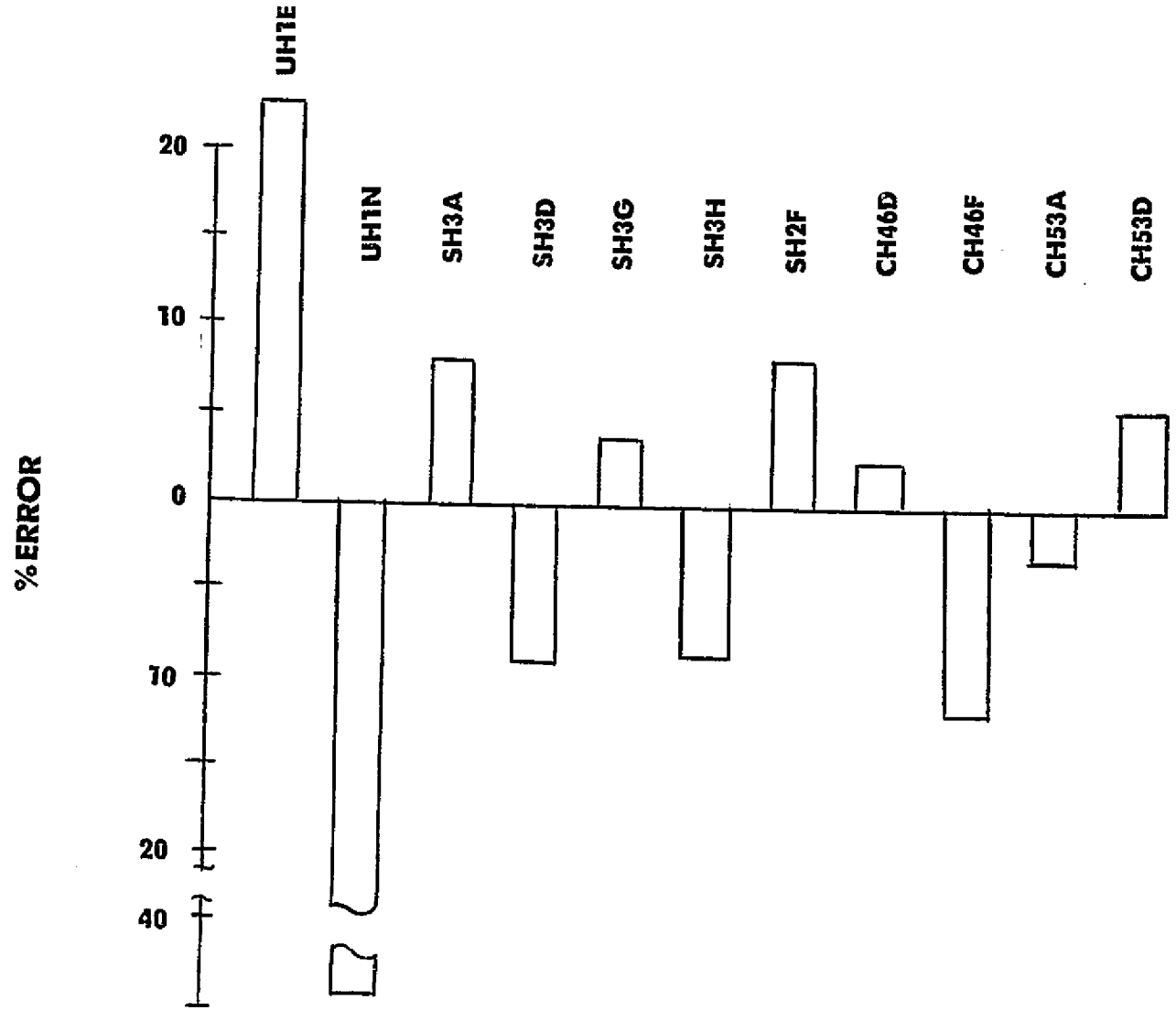


FIGURE 27

TRANSMISSIONS
ERROR IN ESTIMATE OF MMH/FH IN TERMS OF DATA VARIANCE

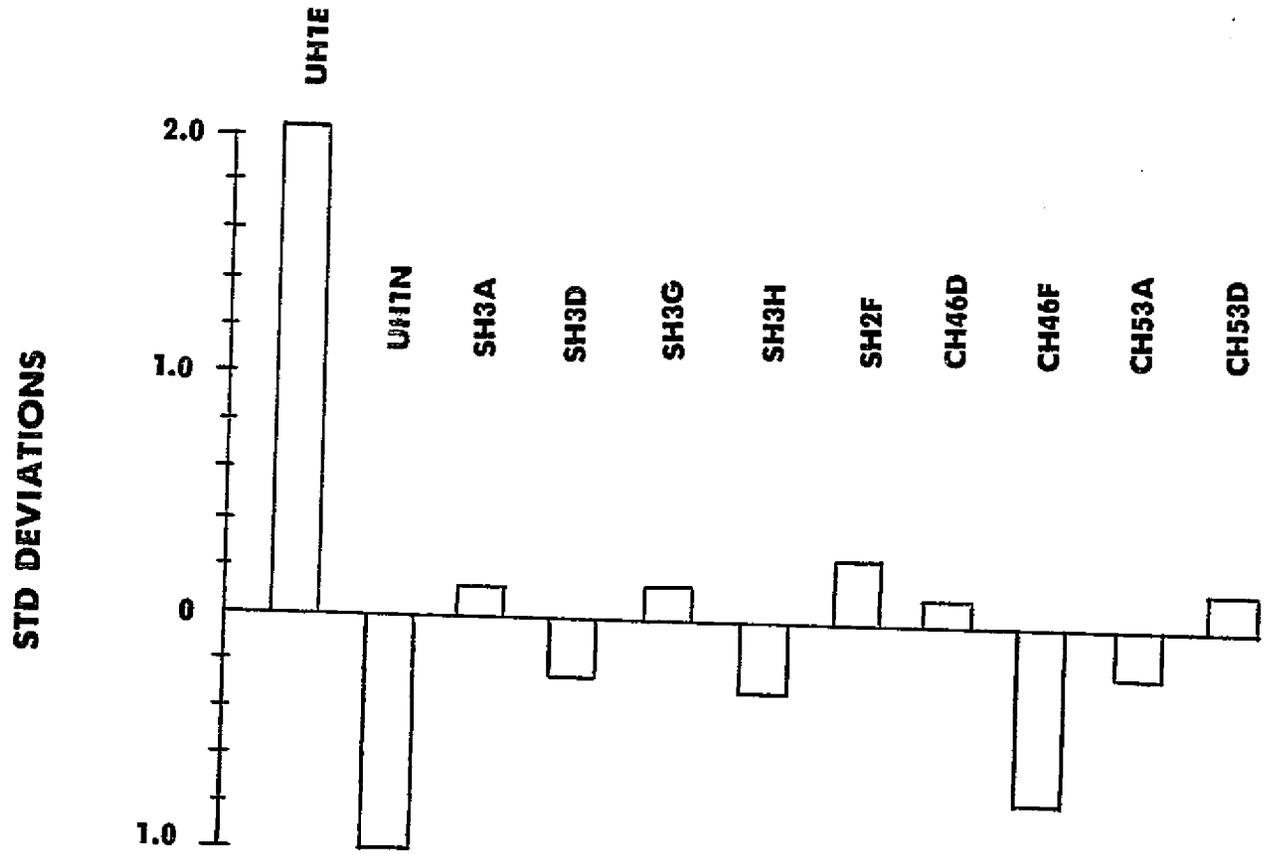


FIGURE 28

DYNAMIC SYSTEM

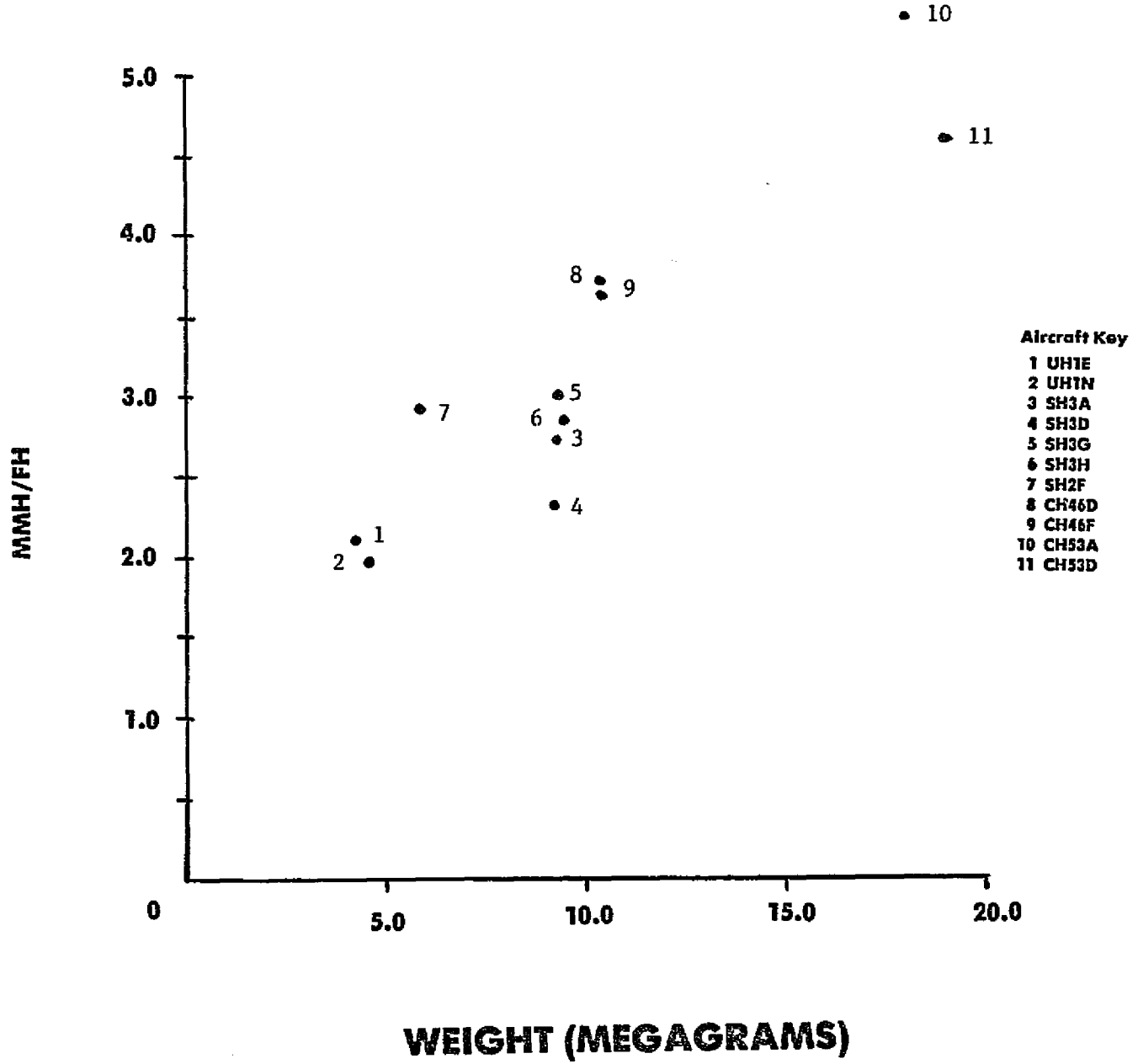


FIGURE 29

DYNAMIC SYSTEM

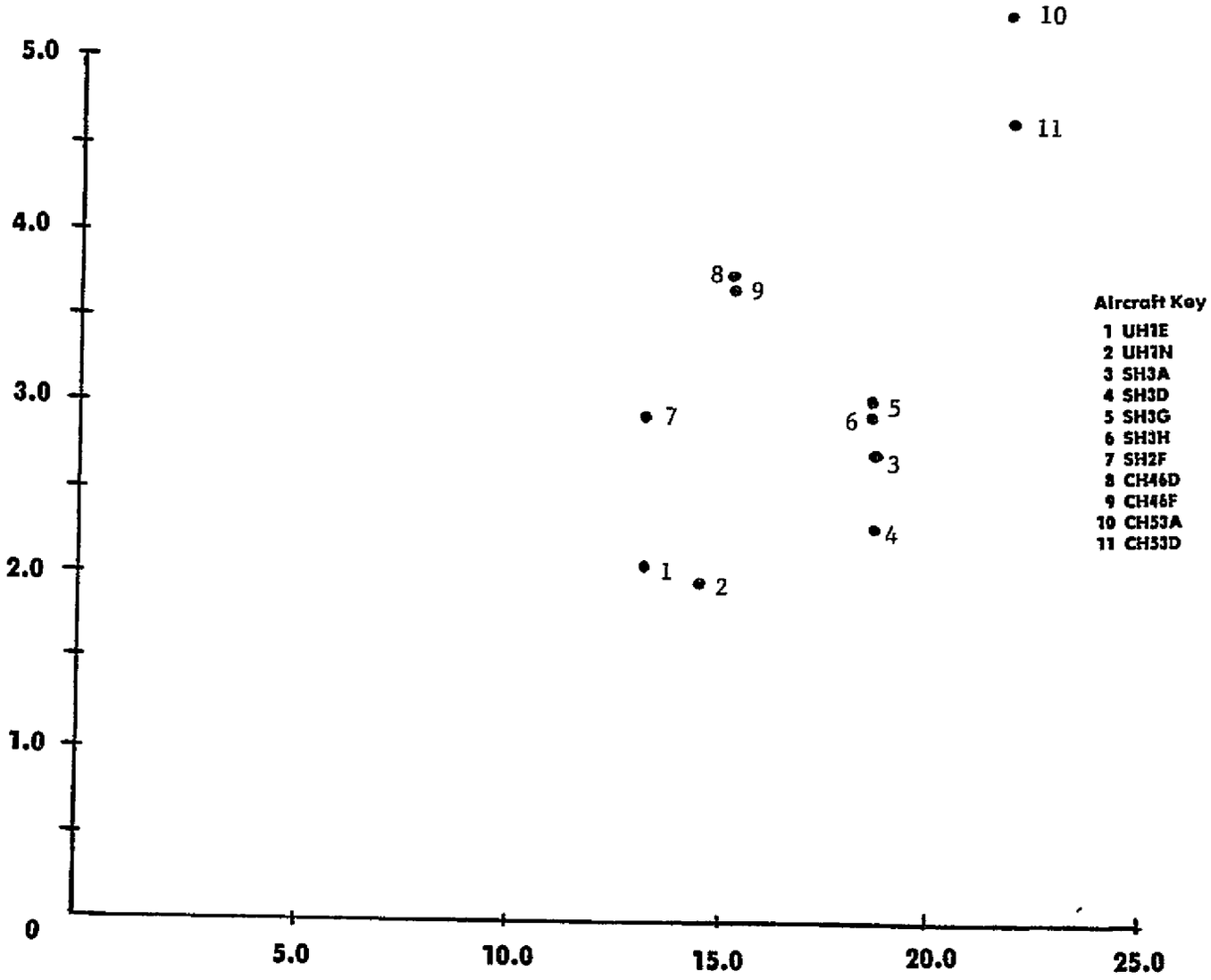
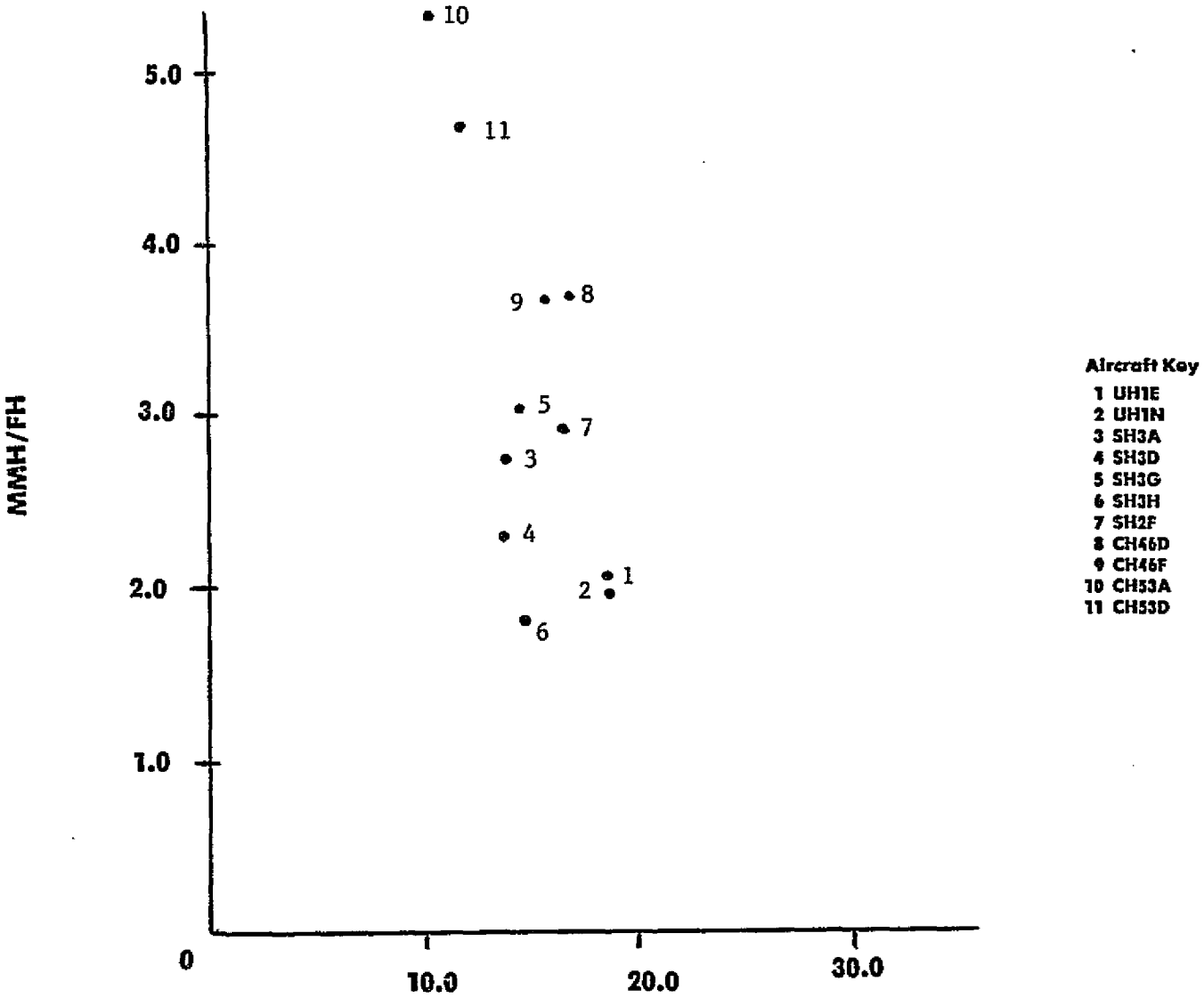


FIGURE 30

DYNAMIC SYSTEM



FLIGHTS PER MONTH

FIGURE 31

DYNAMIC SYSTEM

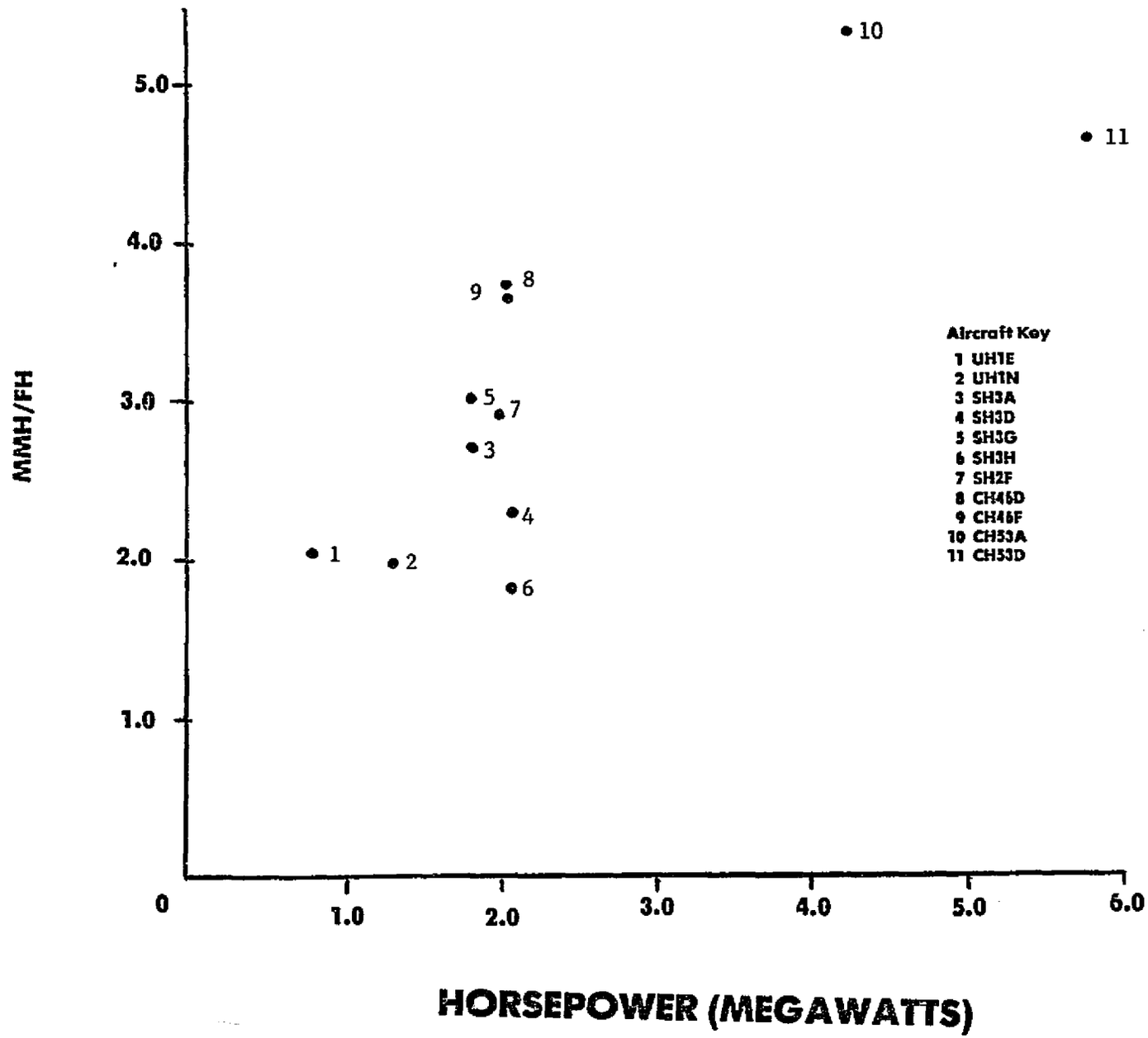


FIGURE 32

MAINTENANCE EQUATION

DYNAMIC SYSTEM

$$MMH/FH = .34026W - .35290D - .15414M + 8.24741$$

WHERE: W = MAXIMUM WEIGHT IN MEGAGRAMS
D = MAIN ROTOR DIAMETER IN METERS
M = FLIGHTS PER AIRCRAFT PER MONTH

CORRELATION COEFFICIENT = .951

		MODEL	95% CRITICAL VALUE
F-VALUE		28.299	4.35
T-VALUE	(W)	6.093	1.89
	(D)	3.029	1.89
	(M)	0.997	1.89

FIGURE 33

DYNAMIC SYSTEMS

ERROR IN ESTIMATE IN PERCENT OF MMH/FH KNOWN VALUE

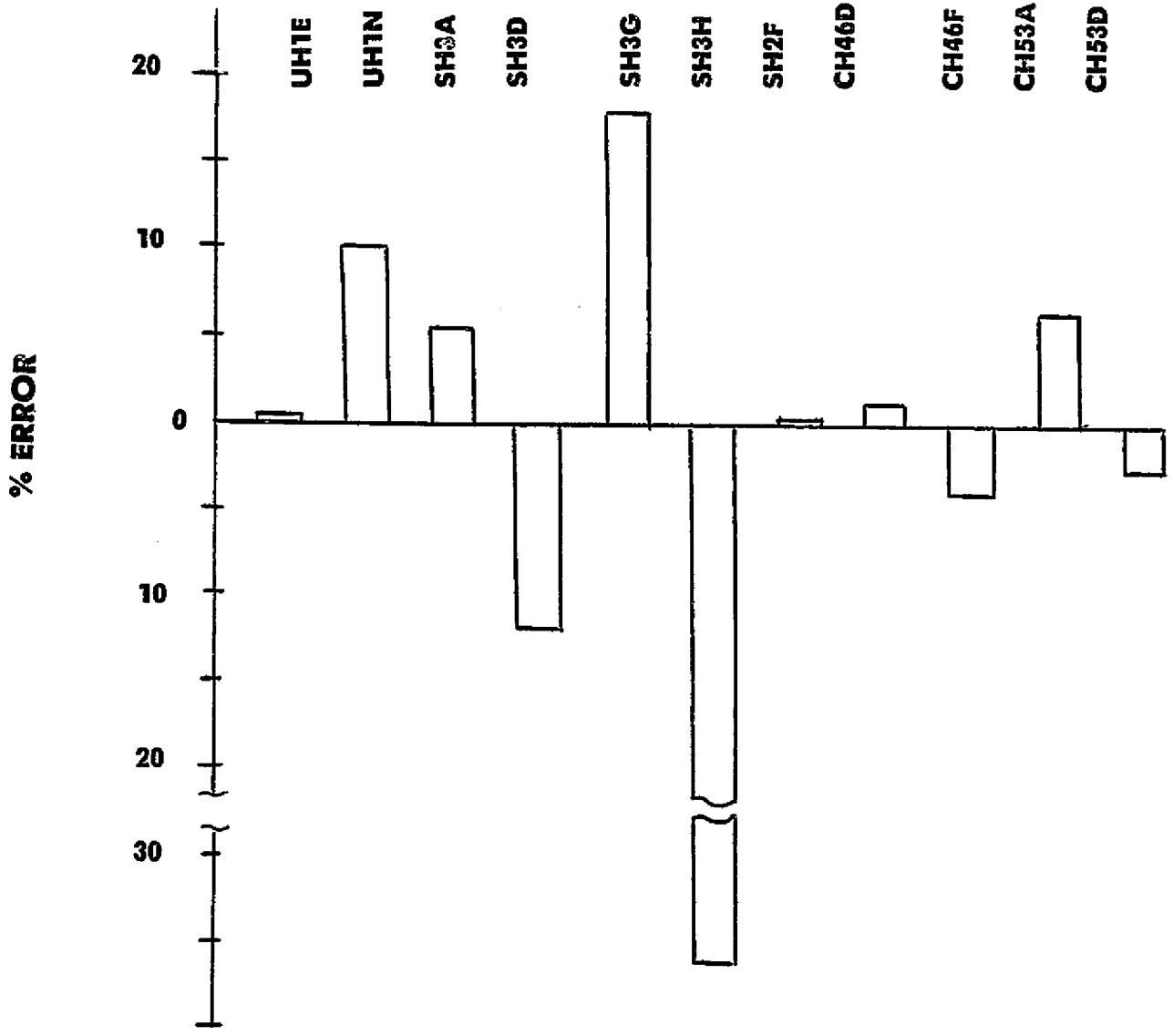


FIGURE 34

DYNAMIC SYSTEMS

ERROR IN ESTIMATE OF MMH/FH IN TERMS OF DATA VARIANCE

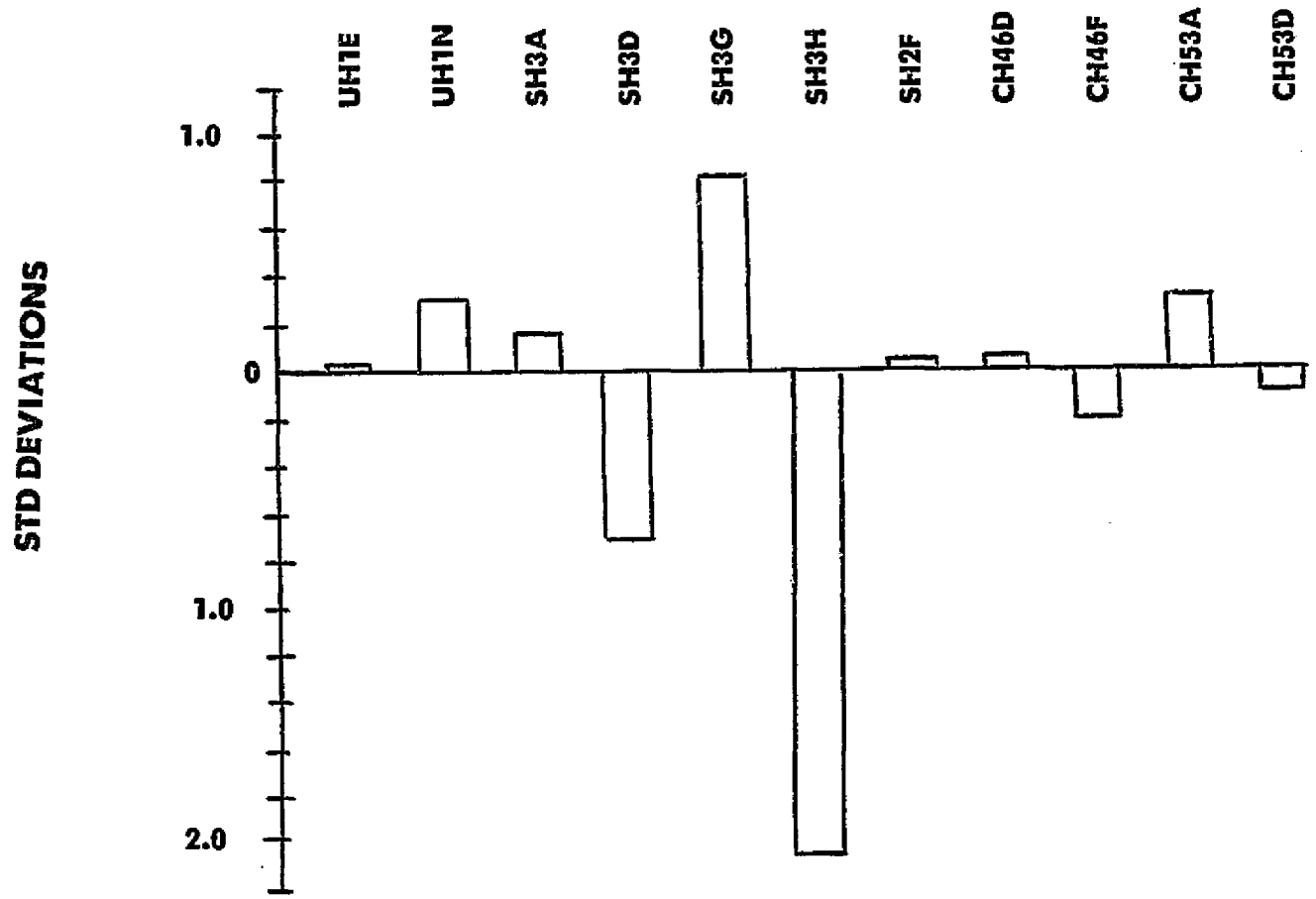


FIGURE 35

DYNAMIC SYSTEM MMH/FH ESTIMATES

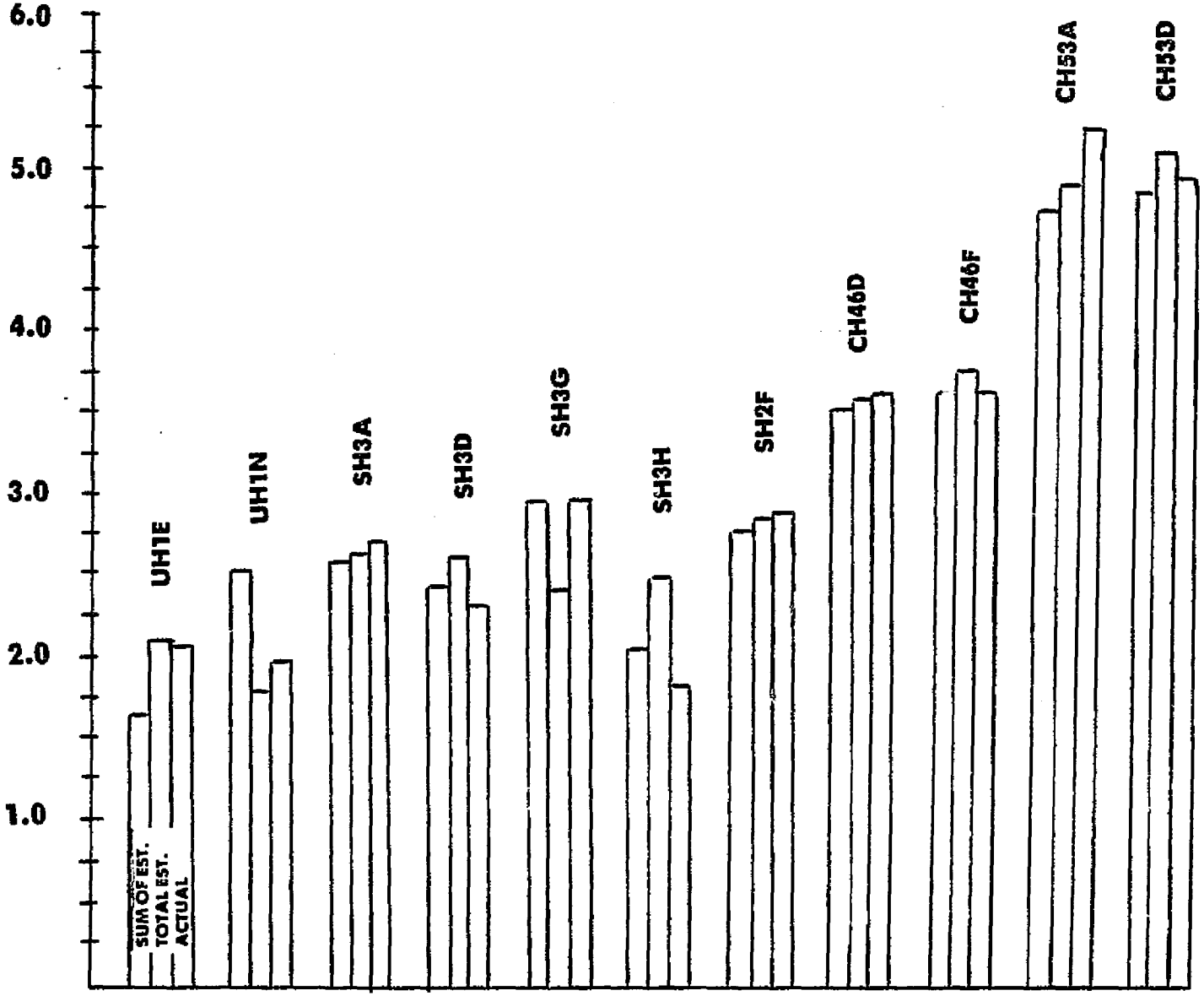


FIGURE 36

VII. Subsystem Analysis

Included in the data base collected there are four aircraft models of a single series helicopter. These aircraft are the A, D, G and H models of the SH-3 helicopter. These data afforded the opportunity to probe deeper into system maintenance requirements by investigating subsystem level implications. This phase of the study was not originally planned but was undertaken near the end because of this unique data base. Under these conditions, it was not practical to fully establish causal relationships between design and maintenance. The intent of this section is to present the data, comment on some apparent relationships, and to provide ideas for possible further analyses.

Figure 37 shows the individual MMH/FH's, by SH-3 model, for each dynamic system of engine, transmission, rotor and flight controls. The total values range from about 1.8 for the SH-3H to slightly over 3 for the SH-3G. Each system contributes about the same percentage to the total for all models.

One easily identifiable design difference between the models is in the installed engine. The SH-3D and SH-3H are equipped with T58-GE-10 engines rated at 1400 HP. The SH-3A and SH-3G are powered by T58-GE-8B

engines rated at 1250 HP. Figure 38 clearly shows a lower MMH for all systems on the SH-3D and SH-3H model aircraft, and this is more pronounced on the transmission and engine systems. Another identifiable difference between the models is in the engine controls. The SH-3A and SH-3G have free-turbine, constant speed engines with hydro-mechanical controls. The SH-3D and SH-3H have integrated hydro-mechanical/electrical power control systems to provide synchronous speed governing and automatic load sharing. A more detailed study of engine controls should be made to establish correlation with MMH/FH for the dynamic components of helicopters.

Figure 39 shows there is a strong inverse correlation between aircraft utilization and dynamic component maintenance. The regression analysis of all aircraft considered also showed this relationship. However, for the SH-3 series aircraft, this relationship could be exaggerated since these models with the T-58-GE-10 engines averaged more flying hours per month than the other helicopters.

Maintenance data for just the rotor and transmission/drive systems were extracted at the sub-system level in order to examine in more detail the maintenance manhour causes. For the rotor system, figures 40 and 41 display these subsystem maintenance contributions. The major contributors

to rotor system maintenance are the main rotor head (about 30%), blade folding mechanism (22%), main rotor blades (17%), and rotor brake system (11%). The remaining 20 percent is caused by other sub-systems such as tail rotor head, tail rotor blades, and rotor electrical/components.

Figures 42 and 43 present the sub-system maintenance contribution to the total for transmissions/drives. The SH-3D and SH-3H models, equipped with T58-GE-10 engines, show transmission maintenance below the mean value. At the sub-system level this was primarily the result of less maintenance for the main gear box and tail drive shaft. The main gear box accounted, on the average, for 60 percent of the transmission/drive system maintenance. The oil cooler/blower and tail drive shaft sub-systems produced 11 and 10 percent, respectively. The remaining sub-systems of tail gear box, intermediate gear box and main gear box electrical contributed less than 10 percent each.

The collected data also provided an opportunity for a similar sub-system analysis of the T58-GE-10 engine. Four aircraft are equipped with these engines. They are the SH-3D, SH-3H, CH-46D and CH-46F. The engine component maintenance manhour per flight hour are graphed in Figures 44 and 45. The largest maintenance manhours required were for the engine assembly. Data in the 3M system is reported as against the engine assembly

when the entire engine is removed. With the exception of the SH-3H, engine assembly maintenance accounted for approximately 50% of the engine system maintenance manhours. The turbine section contributed on the order of 10%, the fuel system on the order of 15% and the balance (25 - 30 percent) was distributed among the other subsystems. Limited maintenance data was reported for some of the following: compressor section, combustion section, accessory drive, lube system, electrical, ignition and bleed air; however, none of these were significant. The main fuel sub-system and turbine section show about equal manhour requirements.

The data presented in Table 12 was extracted from the reported data in order to evaluate the engine subsystems in another manner. Data for maintenance manhours per flight hour (MMH/FH) was divided into its two components, maintenance actions per flight hour (MA/FH) and maintenance manhours per maintenance action (MMH/MA). The former term is a measure of system reliability while the latter is a measure of maintainability.

Examination of Table 12 reveals several things. First, the total engine system exhibits uniform reliability. Note that the data for "TOTAL" in the table includes all sub-systems, not just the three major contributors which are separately entered, and that reliability is uniform at the sub-system level, with one exception. The SH-3H aircraft shows a significantly

TABLE 12

T-58-GE-10 ENGINE MAINTENANCE DATA

	MA/FH				MMH/MA				MMH/FH			
AIRCRAFT TYPE	3D	3H	46D	46F	3D	3H	46D	46F	3D	3H	46D	46F
ENGINE ASSEMBLY	.020	.012	.019	.021	13.9	9.4	19.9	23.7	.28	.11	.38	.50
TURBINE SECTION	.012	.010	.017	.014	5.0	9.4	3.8	5.0	.06	.09	.07	.07
MAIN FUEL SYSTEM	.028	.025	.031	.023	3.7	3.3	4.1	3.6	.11	.09	.12	.08
OTHER	.051	.063	.033	.032	2.9	1.9	6.4	5.6	.15	.12	.21	.18
TOTAL	.110	.110	.10	.09	5.68	3.80	7.80	8.38	.60	.41	.78	.83

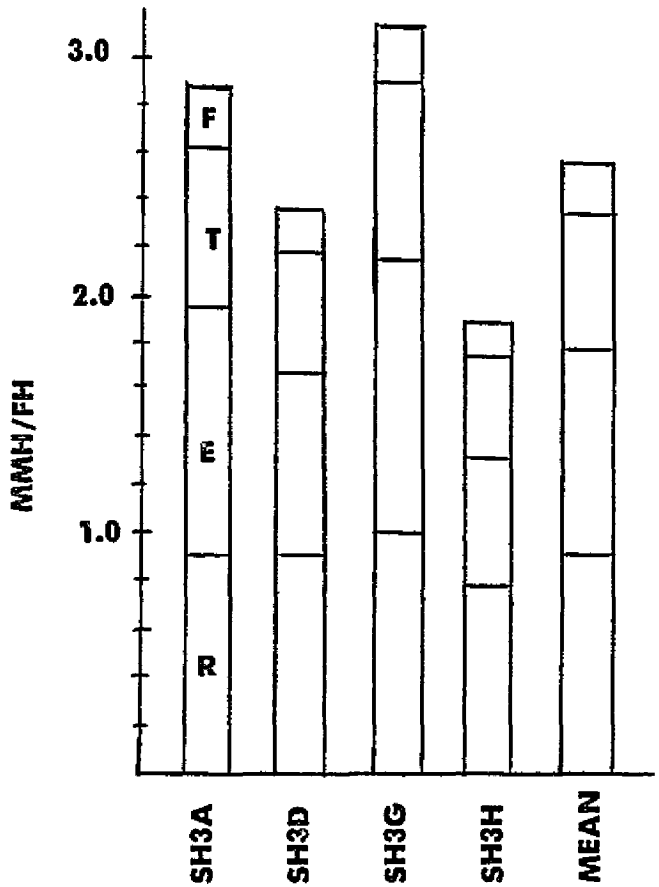
lower maintenance action rate than the other models for its engine assembly. A possible explanation of this is the in-service time of the aircraft. The SH-3H is the last model introduced into the fleet, being in 1973, and the data base is from calendar years of 1974 and 1975. As such, all these aircraft were thus most likely operating with relatively new engines. Therefore, this could explain the lower maintenance action rate for their entire engine assembly. On the other hand the MA rate for other engine sub-systems were about equal.

Maintainability data (MMH/MA) show that manhours per maintenance action are significantly higher for both CH-46 models. Turbine and fuel sub-system MMH/MA are relatively uniform for the other aircraft. These data would suggest that the engine removal on the CH-46 could be a more difficult task than removal of the same engine type on the SH-3. Examination of maintenance manuals for these two models tends to support this concept. Ease of engine assembly removal becomes a significant maintenance cost factor to consider in the design process.

The limited sub-system analysis indicates that additional insights into the cost relationship between maintenance and design can be achieved by pursuing more of this type of in depth analysis.

SH3 MODELS DYNAMIC SYSTEMS

R – ROTOR
E – ENGINE
T – TRANSMISSION
F – FLIGHT CONTROL



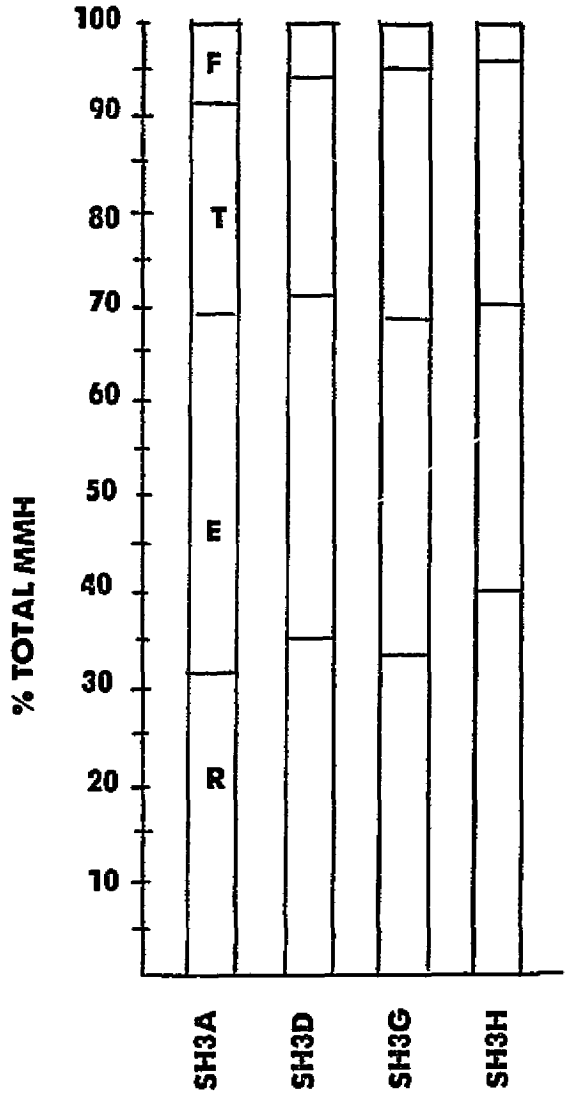


FIGURE 37

SH3 MODELS SYSTEM DATA

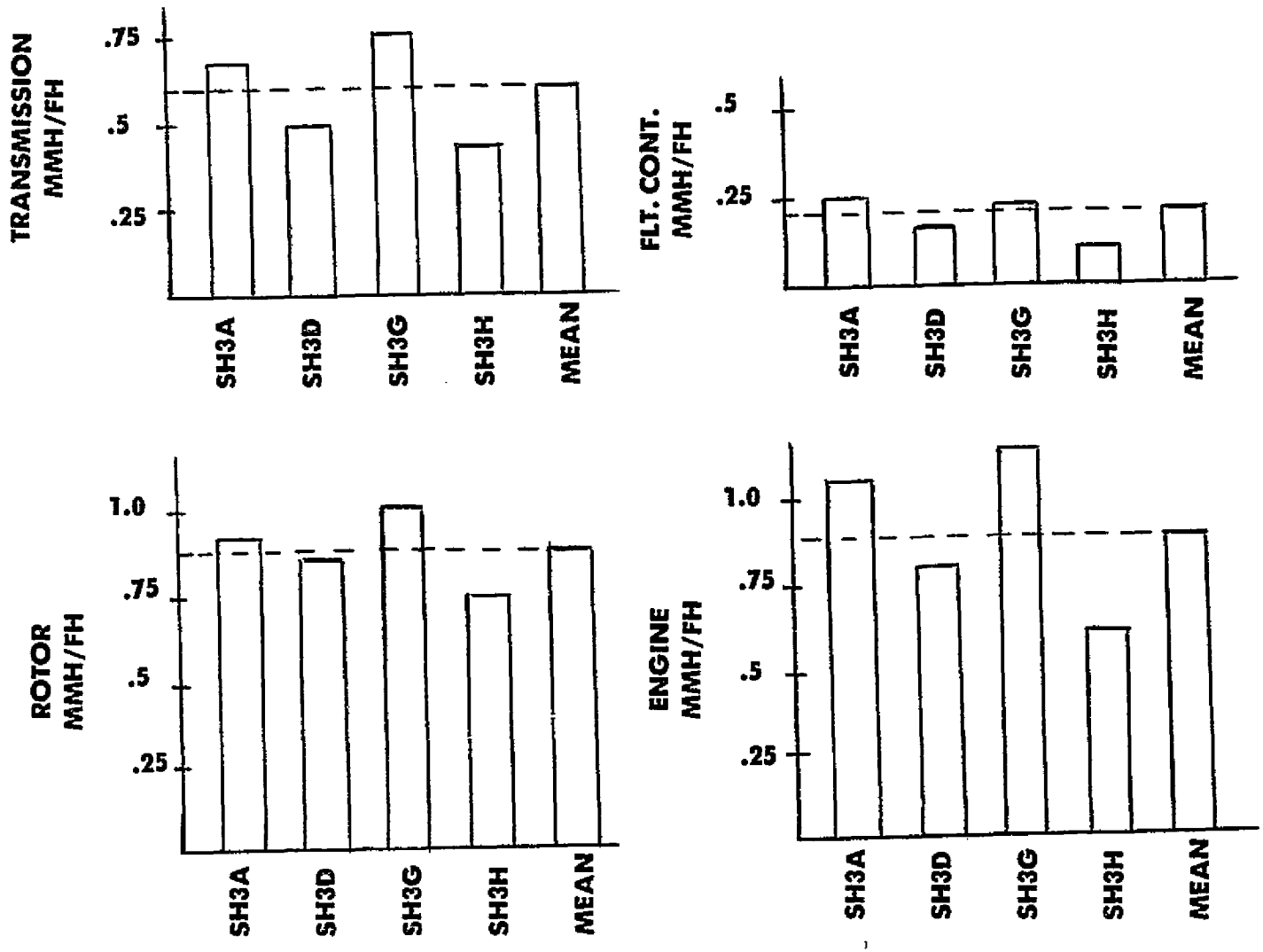


FIGURE 38

SH3 MODELS MMH/FH VERSUS FLIGHT HOURS

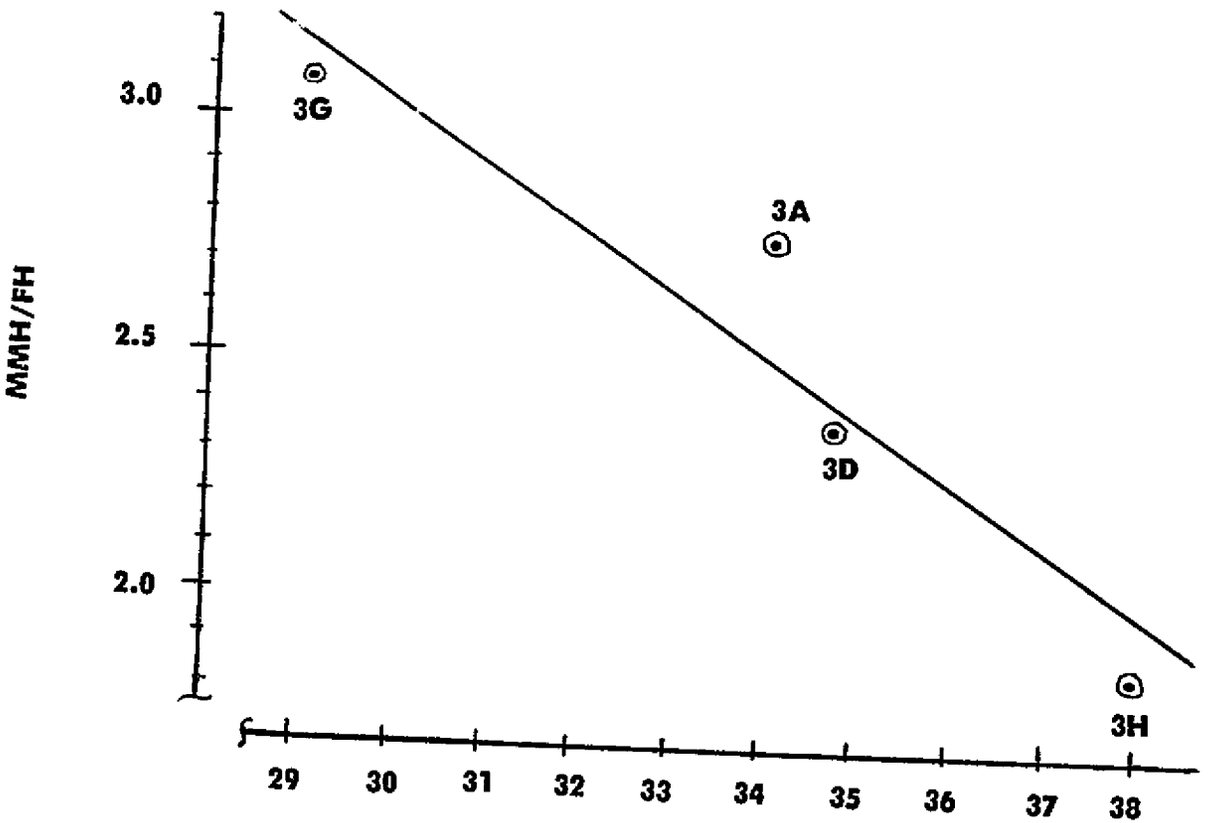


FIGURE 39

ROTOR SUBSYSTEM MAINTENANCE

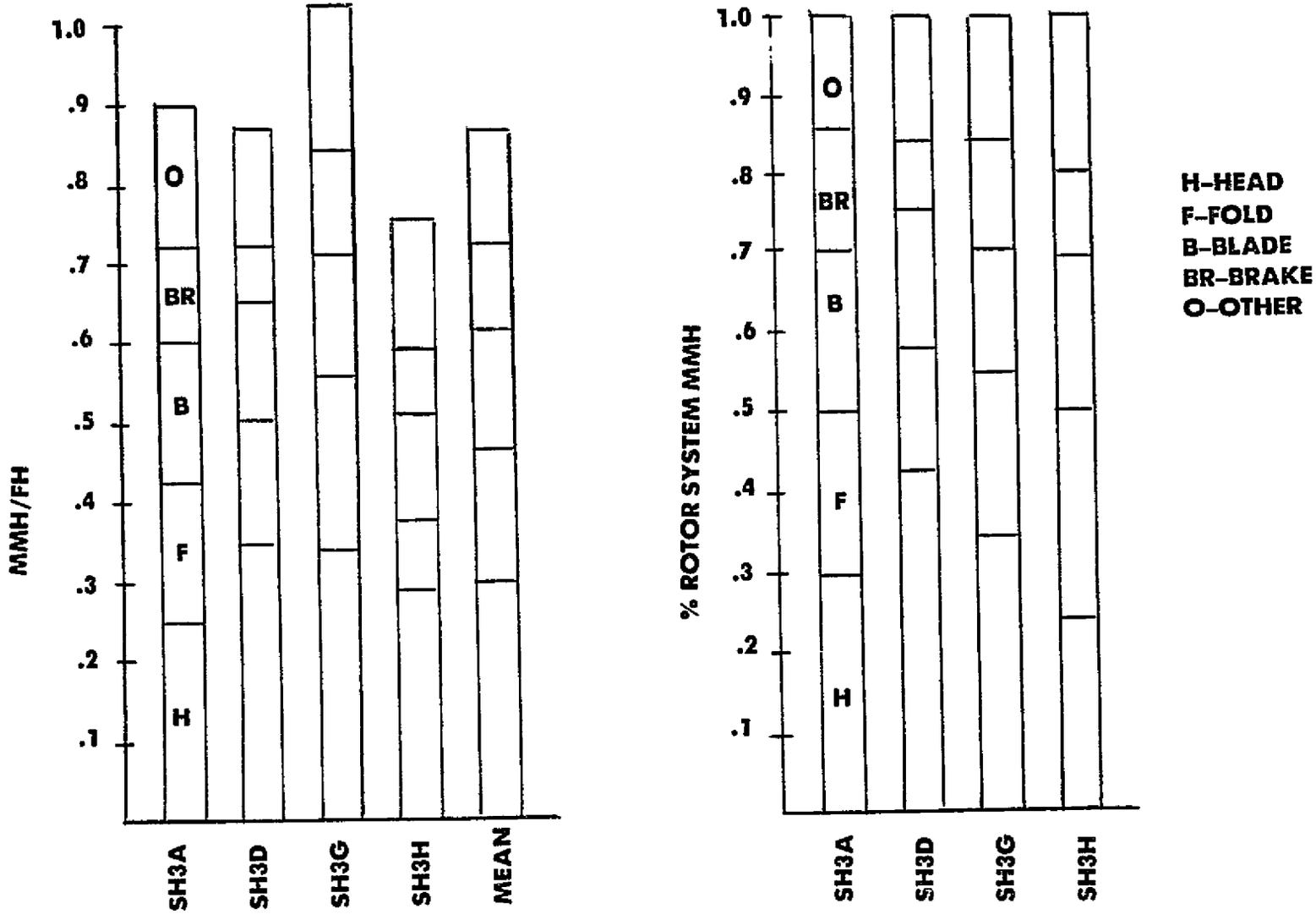


FIGURE 40

ROTOR SUBSYSTEM COMPARISONS

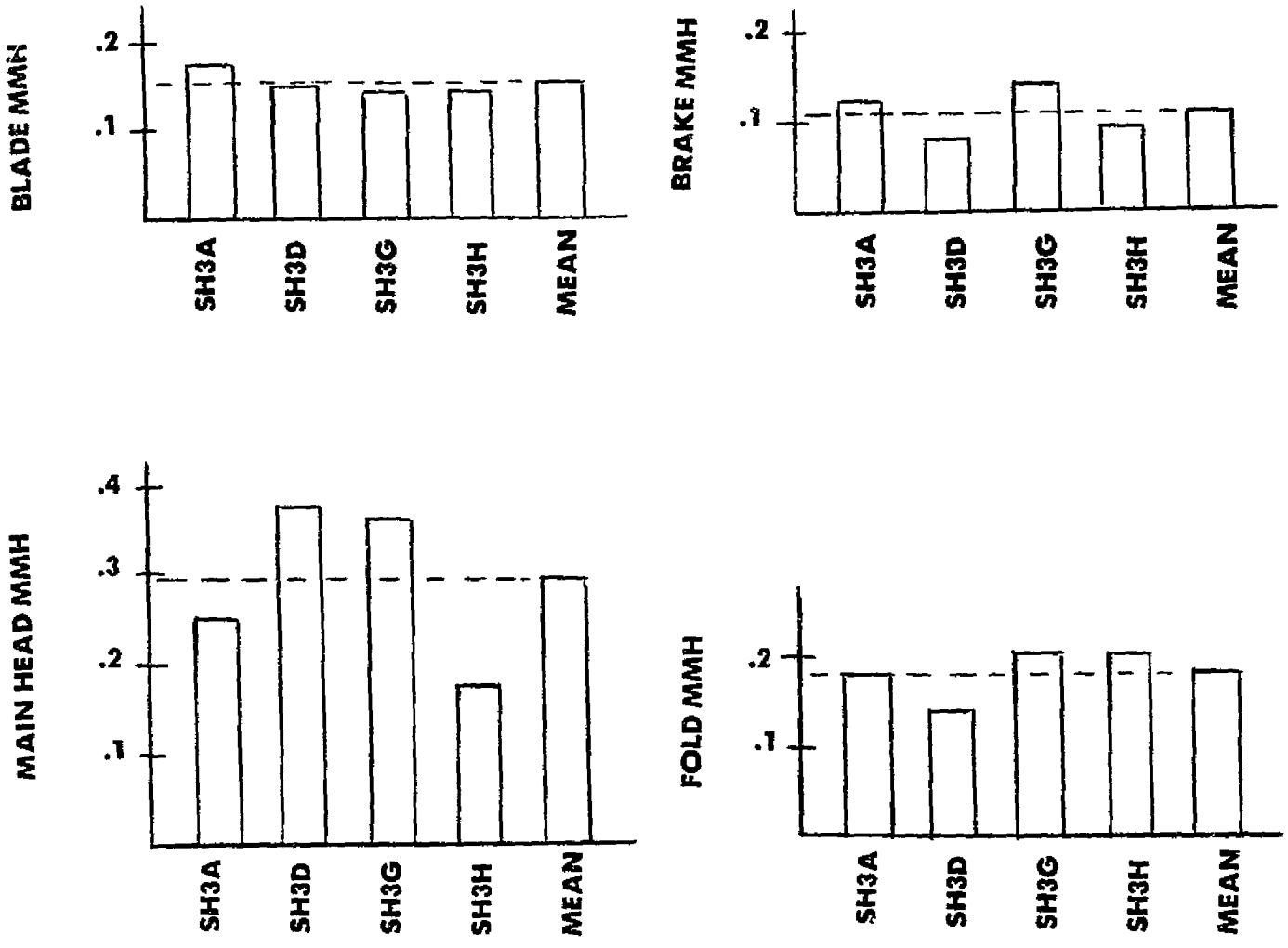


FIGURE 41

TRANSMISSION SUBSYSTEM MAINTENANCE

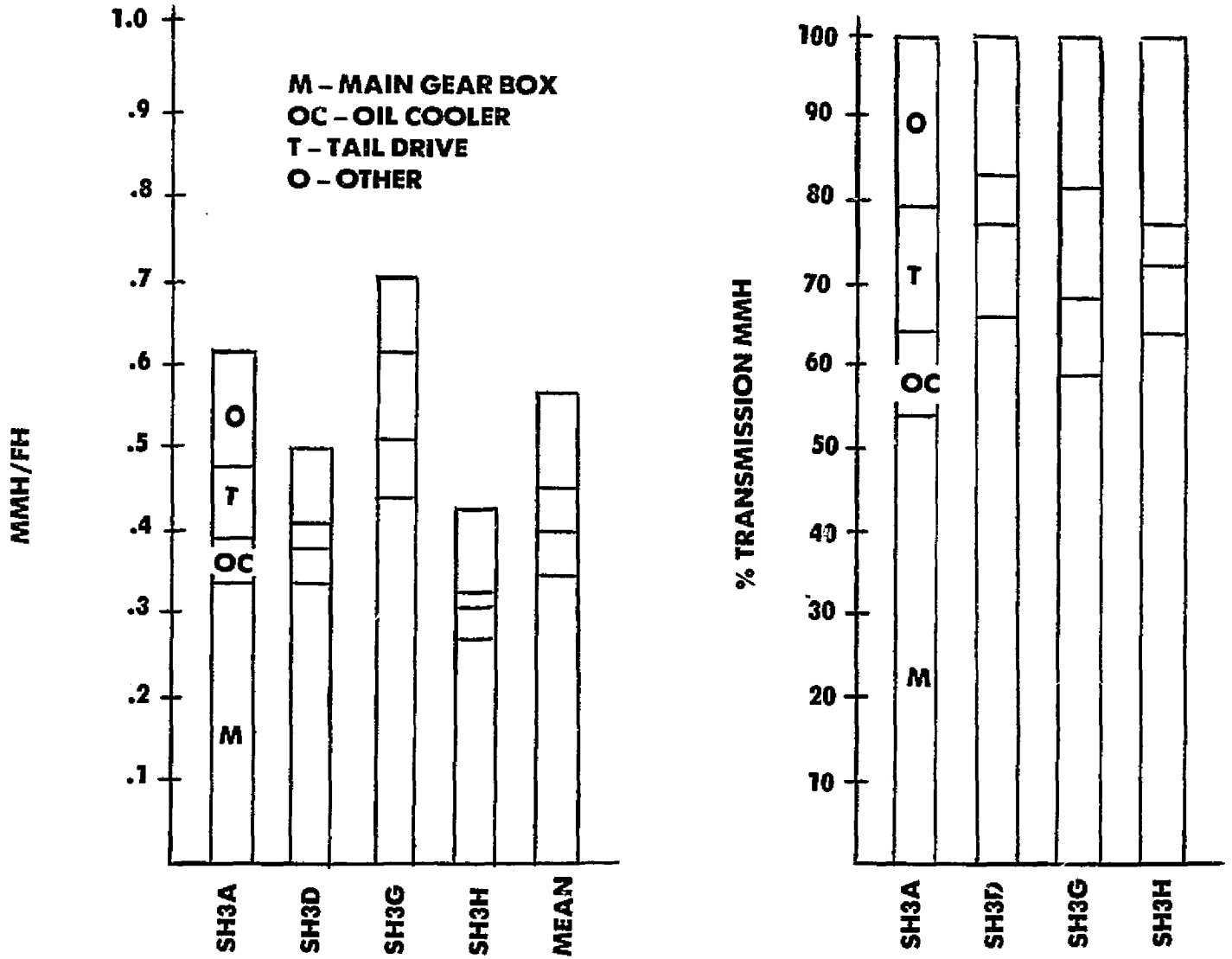
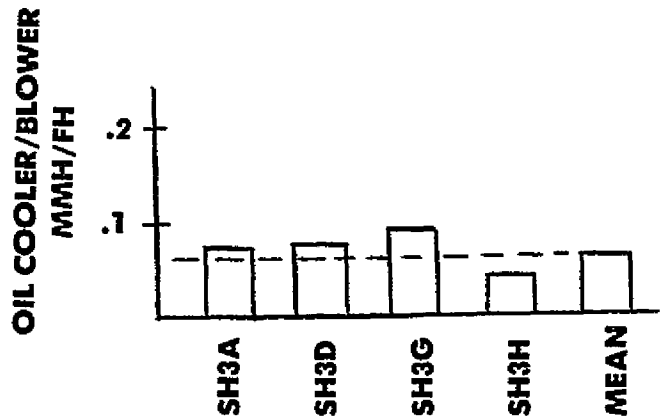
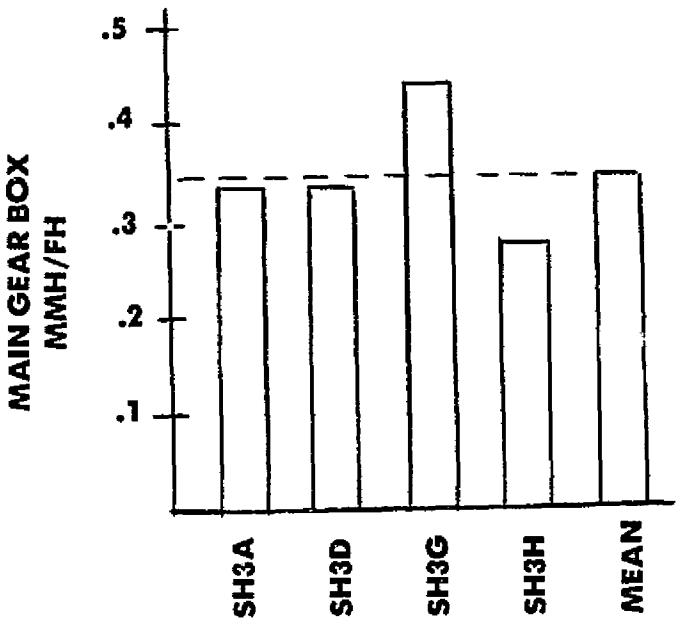


FIGURE 42

TRANSMISSION SUBSYSTEMS COMPARISONS





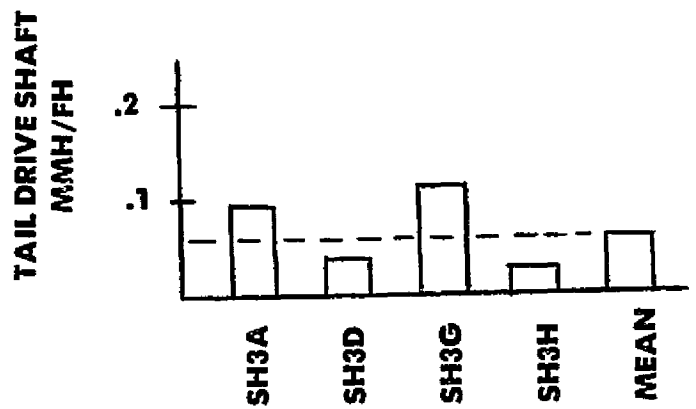


FIGURE 43

INSTALLED T58–GE ,0 ENGINE SYSTEM MAINTENANCE

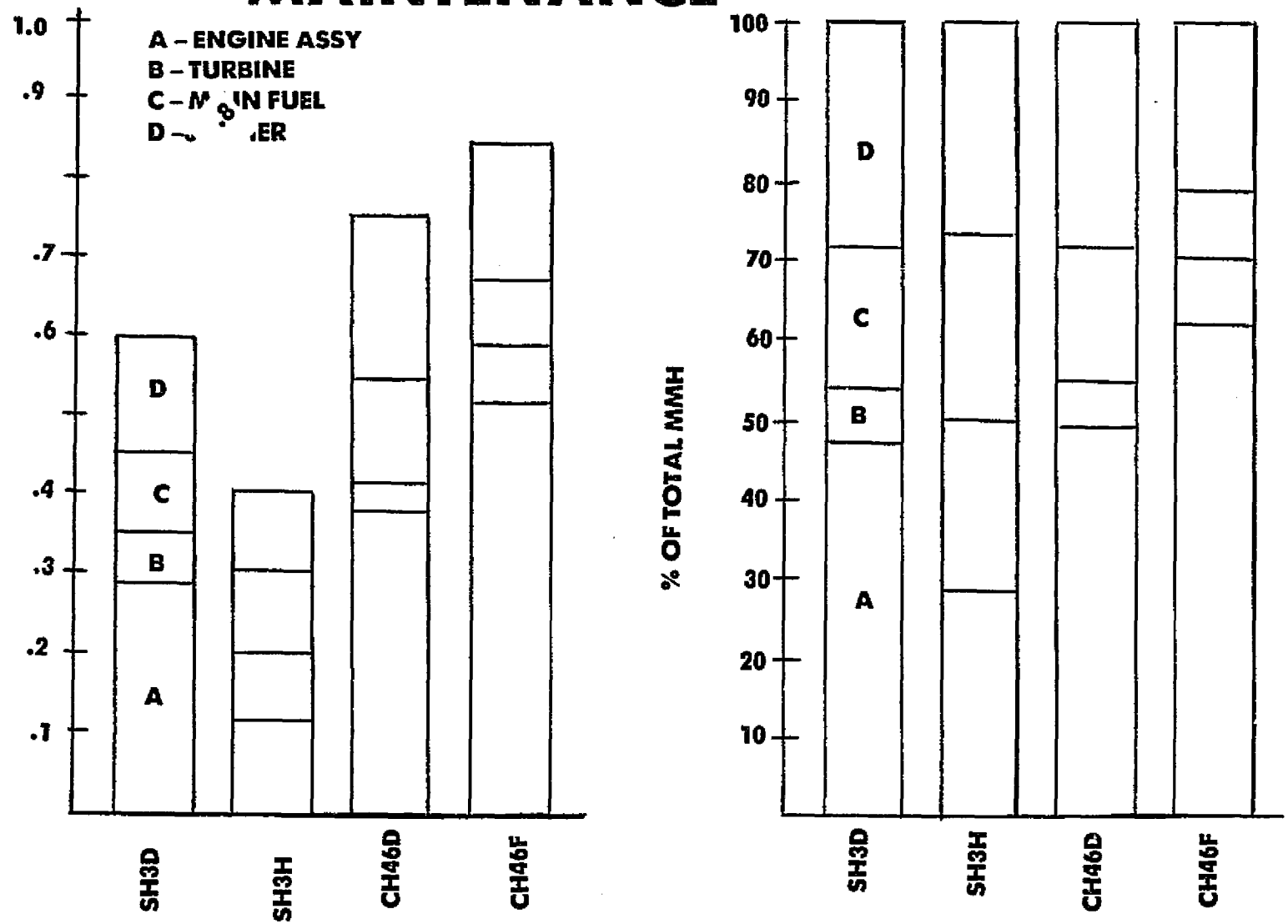


FIGURE 44

T58-GE10 ENGINE SUBSYSTEM COMPARISONS

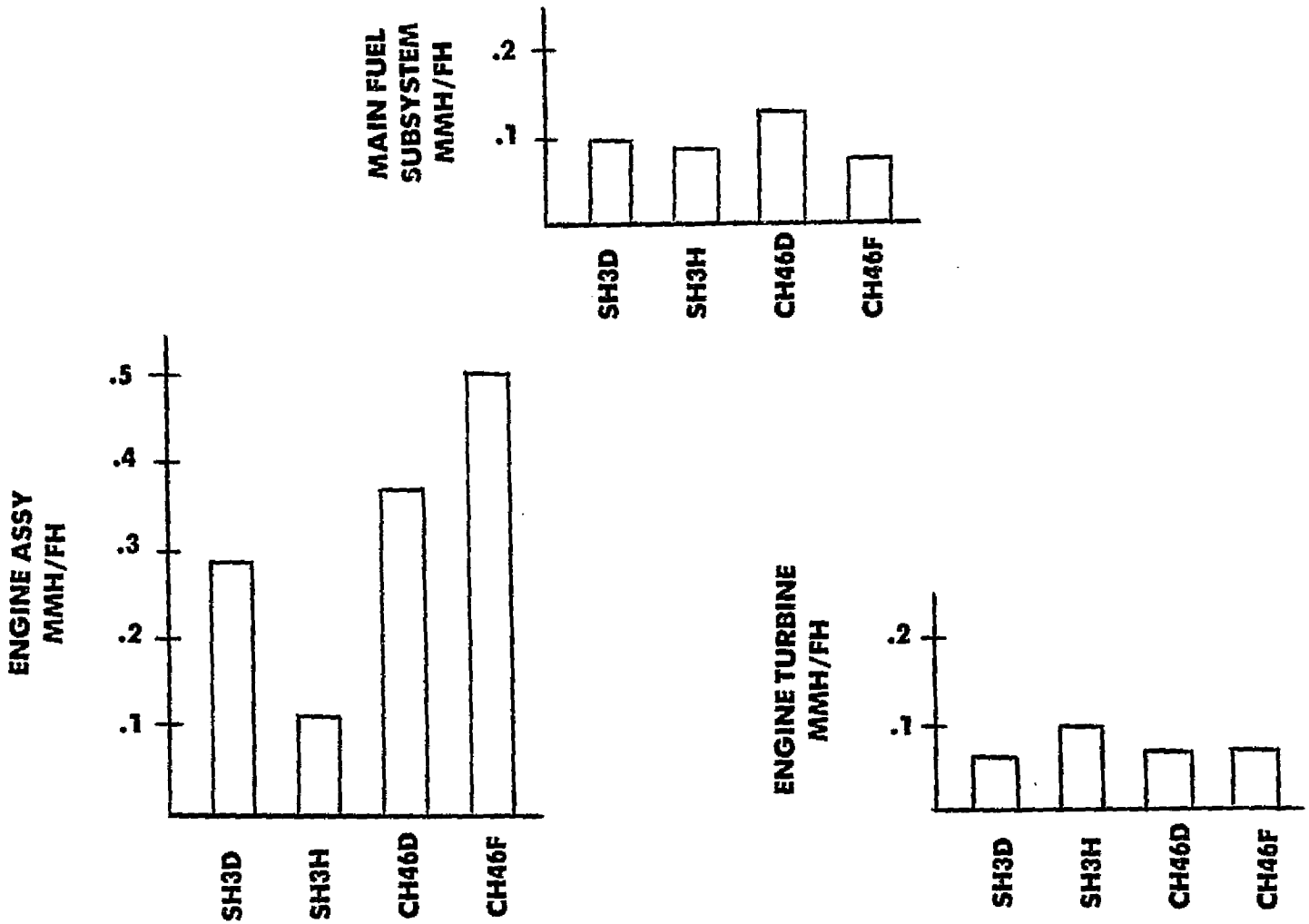


FIGURE 45

APPENDIX A

3-M MAINTENANCE DATA

\PPENDIX A

The data presented in this appendix are summarized from NAVY Maintenance, Material, Management (3M) reports. They cover all flying and maintenance activity for 13 rotary wing aircraft during calendar years 1974 and 1975. Data are separated by using command and are presented in six month summaries. Each page presents data for one aircraft type from one using command. Data are reported in six month summaries and for the total two year period. The following definitions and abbreviations apply throughout.

AVG. # OF AC - - Average number of aircraft reporting data within the using command.

FAILURES - - The 3M definition of a failure is any maintenance action which resulted in a remove and replace; repair; repair or replacement of attaching part; or corrosion treatment.

FLT. HRS. - Flight Hours

MA's - Number of unscheduled maintenance actions

MFHBF - Mean Flying Hours Between Failure

MFHBMA - Mean Flying Hours Between Unscheduled Maintenance Action

MMH - Maintenance Man Hours
(unscheduled maintenance)

MMH/FH - Maintenance Man hours per Flying Hour

MMH/MA - Maintenance Man Hours per Maintenance Action

NO. OF FLTS - Number of Flights

Using Commands -

- CNAL - Naval Air Forces, Atlantic
- CNAP - Naval Air Forces, Pacific
- FMFLANT - Fleet Marine Forces, Atlantic
- FMFPAC - Fleet Marine Forces, Pacific
- MARNFMF - Non Fleet Marine Forces
- NASC - Naval Air Systems Command
- NATRA - Naval Training Activity
- RESFOR - Naval Reserve Forces

WUC - Work Unit Code, identifies all components in aircraft by a structured number code

- 14XXX - Flight Control System
- 15XXX - Rotor System

22XXX - Turbo Shaft Engine

26XXX - Drives and Transmissions

29XXX - Power Plant Installation

Note that data entered for ENTIRE A/C is not simply the sum of the above WUC's but covers all aircraft systems.

	WUC	1/74 THRU 6/74	UH-1N 7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		663.	782.	584.	533.	2562.
AVG.#OF AC		7.90	8.80	7.80	5.10	7.40
NO OF FLTS		1033.	1383.	768.	352.	3536.
MA'S	14XXX	44	33	42	24	143
	15XXX	79	51	54	59	223
	22XXX	74	71	49	35	229
	26XXX	29	44	14	27	114
	29XXX	57	59	33	50	199
	ENTIRE A/C	482	630	467	462	2041
MFHBMA	14XXX	15.07	23.70	13.90	22.21	17.92
	15XXX	11.24	15.33	10.81	9.03	11.49
	22XXX	8.96	11.01	11.92	15.23	11.19
	26XXX	22.86	17.77	41.71	19.74	22.47
	29XXX	11.63	13.25	17.70	10.66	12.87
	ENTIRE A/C	1.38	1.24	1.25	1.15	1.26
FAILURES	14XXX	24	16	17	13	70
	15XXX	26	22	32	21	101
	22XXX	33	42	20	22	117
	26XXX	10	15	9	8	42
	29XXX	35	41	19	25	120
	ENTIRE A/C	242	343	230	201	1016
MFHBF	14XXX	27.62	48.88	34.35	41.00	36.60
	15XXX	25.50	35.55	18.25	25.38	25.37
	22XXX	20.09	18.62	29.20	24.23	21.90
	26XXX	66.30	52.13	64.89	66.63	61.00
	29XXX	18.94	19.07	30.74	21.32	21.35
	ENTIRE A/C	2.74	2.28	2.54	2.65	2.52
MMH	14XXX	252	242	435	115	1044
	15XXX	275	138	136	146	695
	22XXX	877	606	451	288	2222
	26XXX	66	183	27	62	338
	29XXX	199	149	89	92	529
	ENTIRE A/C	2359	2479	2038	1525	8401
MMH/FH	14XXX	0.38	0.31	0.74	0.22	0.41
	15XXX	0.41	0.18	0.23	0.27	0.27
	22XXX	1.32	0.77	0.77	0.54	0.87
	26XXX	0.10	0.23	0.05	0.12	0.13
	29XXX	0.30	0.19	0.15	0.17	0.21
	ENTIRE A/C	3.56	3.17	3.49	2.86	3.28
MMH/MA	14XXX	5.73	7.33	10.36	4.79	7.30
	15XXX	4.66	2.71	2.52	2.47	3.12
	22XXX	11.85	8.54	9.20	8.23	9.70
	26XXX	2.28	4.16	1.93	2.30	2.96
	29XXX	3.49	2.53	2.70	1.84	2.66
	ENTIRE A/C	4.89	3.93	4.36	3.30	4.12

SH-2F CNAL

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2673.	3337.	4518.	5400.	15928.
AVG.#OF AC		17.10	27.30	30.80	34.50	27.43
NO OF FLTS		1724.	2031.	2661.	3126.	9542.
MA'S	14XXX	333	334	418	633	1718
	15XXX	682	881	1212	1642	4417
	22XXX	626	954	1244	1580	4404
	26XXX	665	760	1111	1495	4031
	29XXX	261	440	611	750	2062
	ENTIRE A/C	8060	9727	14576	17954	50317
MFHBMA	14XXX	8.03	9.99	10.81	8.53	9.27
	15XXX	3.92	3.79	3.73	3.29	3.61
	22XXX	4.27	3.50	3.63	3.42	3.62
	26XXX	4.02	4.39	4.07	3.61	3.95
	29XXX	10.24	7.58	7.39	7.20	7.72
	ENTIRE A/C	0.33	0.34	0.31	0.30	0.32
FAILURES	14XXX	125	126	175	275	701
	15XXX	340	437	647	811	2235
	22XXX	321	467	629	810	2227
	26XXX	295	369	493	629	1786
	29XXX	113	195	293	345	946
	ENTIRE A/C	3625	4526	6960	8472	23583
MFHBF	14XXX	21.38	26.48	25.82	19.64	22.72
	15XXX	7.86	7.64	6.98	6.66	7.13
	22XXX	8.33	7.15	7.18	6.67	7.15
	26XXX	9.06	9.04	9.16	8.59	8.92
	29XXX	23.65	17.11	15.42	15.65	16.84
	ENTIRE A/C	0.74	0.74	0.65	0.64	0.68
MMH	14XXX	1157	1281	1886	3128	7452
	15XXX	1609	2620	3580	5374	13183
	22XXX	1647	3205	3583	5121	13556
	26XXX	1870	2625	3683	5310	13488
	29XXX	789	1386	1752	2401	6328
	ENTIRE A/C	20529	29922	43544	56028	150023
MMH/FH	14XXX	0.43	0.38	0.42	0.58	0.47
	15XXX	0.60	0.79	0.79	1.00	0.83
	22XXX	0.62	0.96	0.79	0.95	0.85
	26XXX	0.70	0.79	0.82	0.98	0.85
	29XXX	0.30	0.42	0.39	0.44	0.40
	ENTIRE A/C	7.68	8.97	9.64	10.38	9.42
MMH/MA	14XXX	3.47	3.84	4.51	4.94	4.34
	15XXX	2.36	2.97	2.95	3.27	2.98
	22XXX	2.63	3.36	2.88	3.24	3.08
	26XXX	2.81	3.45	3.32	3.55	3.35
	29XXX	3.02	3.15	2.87	3.20	3.07
	ENTIRE A/C	2.55	3.08	2.99	3.12	2.98

SH-3A CNAL

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		1071.	1128.	1321.	923.	4443.
AVG.#OF AC		5.90	8.90	8.20	5.20	7.05
NO OF FLTS		520.	550.	649.	502.	2221.
MA'S	14XXX	47	75	98	99	319
	15XXX	152	210	269	167	798
	22XXX	165	240	228	219	852
	26XXX	94	99	103	72	368
	29XXX	73	74	72	92	311
	ENTIRE A/C	2025	2559	3162	2297	10043
MFHBMA	14XXX	22.79	15.04	13.48	9.32	13.93
	15XXX	7.05	5.37	4.91	5.53	5.57
	22XXX	6.49	4.70	5.79	4.21	5.21
	26XXX	11.39	11.39	12.83	12.82	12.07
	29XXX	14.67	15.24	18.35	10.03	14.29
	ENTIRE A/C	0.53	0.44	0.42	0.40	0.44
FAILURES	14XXX	35	36	51	63	185
	15XXX	81	123	153	71	428
	22XXX	89	134	103	97	423
	26XXX	56	58	63	46	223
	29XXX	40	46	40	44	170
	ENTIRE A/C	1067	1303	1485	1084	4939
MFHBF	14XXX	30.60	31.33	25.90	14.65	24.02
	15XXX	13.22	9.17	8.63	13.00	10.38
	22XXX	12.03	8.42	12.83	9.52	10.50
	26XXX	19.12	19.45	20.97	20.07	19.92
	29XXX	26.77	24.52	33.02	20.98	26.14
	ENTIRE A/C	1.00	0.87	0.89	0.85	0.90
MMH	14XXX	196	318	755	432	1701
	15XXX	1361	1365	1302	597	4625
	22XXX	681	1221	1136	929	3967
	26XXX	269	1965	1133	385	3752
	29XXX	130	181	141	183	635
	ENTIRE A/C	6950	12062	13524	7178	39714
MMH/FH	14XXX	0.18	0.28	0.57	0.47	0.38
	15XXX	1.27	1.21	0.99	0.65	1.04
	22XXX	0.64	1.08	0.86	1.01	0.89
	26XXX	0.25	1.74	0.86	0.42	0.84
	29XXX	0.12	0.16	0.11	0.20	0.14
	ENTIRE A/C	6.49	10.69	10.24	7.78	8.94
MMH/MA	14XXX	4.17	4.24	7.70	4.36	5.33
	15XXX	8.95	6.50	4.84	3.57	5.80
	22XXX	4.13	5.09	4.98	4.24	4.66
	26XXX	2.86	19.85	11.00	5.35	10.20
	29XXX	1.78	2.45	1.96	1.99	2.04
	ENTIRE A/C	3.43	4.71	4.28	3.12	3.95

	WUC	1/74 THRU 6/74	SH-3D 7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		5794.	5793.	5338.	6799.	23724.
AVG.#OF AC		27.80	27.00	24.90	27.80	26.88
NO OF FLTS		2168.	2252.	2092.	2302.	8814.
MA'S	14XXX	335	360	290	440	1425
	15XXX	926	1176	1037	1340	4479
	22XXX	789	631	818	808	3046
	26XXX	400	395	375	360	1530
	29XXX	397	372	400	541	1710
	ENTIRE A/C	13837	14622	13446	15969	57874
MFHRMA	14XXX	17.30	16.09	18.41	15.45	16.65
	15XXX	6.26	4.93	5.15	5.07	5.30
	22XXX	7.34	9.18	6.53	8.41	7.79
	26XXX	14.48	14.67	14.23	18.89	15.51
	29XXX	14.59	15.57	13.34	12.57	13.87
	ENTIRE A/C	0.42	0.40	0.40	0.43	0.41
FAILURES	14XXX	161	179	142	223	705
	15XXX	384	526	516	611	2037
	22XXX	278	258	313	264	1113
	26XXX	201	198	208	206	813
	29XXX	190	175	171	217	753
	ENTIRE A/C	5572	6001	5909	6803	24285
MFHRF	14XXX	35.99	32.36	37.59	30.49	33.65
	15XXX	15.09	11.01	10.34	11.13	11.65
	22XXX	20.84	22.45	17.05	25.75	21.32
	26XXX	28.83	29.26	25.66	33.00	29.18
	29XXX	30.49	33.10	31.22	31.33	31.51
	ENTIRE A/C	1.04	0.97	0.90	1.00	0.98
MMH	14XXX	892	990	925	1145	3952
	15XXX	3208	4749	4293	6107	18357
	22XXX	3093	2579	4727	3022	13421
	26XXX	2031	2706	3244	1957	9938
	29XXX	798	965	1076	1172	4011
	ENTIRE A/C	38880	47225	44060	53174	183339
MMH/FH	14XXX	0.15	0.17	0.17	0.17	0.17
	15XXX	0.55	0.82	0.80	0.90	0.77
	22XXX	0.53	0.45	0.89	0.44	0.57
	26XXX	0.35	0.47	0.61	0.29	0.42
	29XXX	0.14	0.17	0.20	0.17	0.17
	ENTIRE A/C	6.71	8.15	8.25	7.82	7.73
MMH/MA	14XXX	2.66	2.75	3.19	2.60	2.77
	15XXX	3.46	4.04	4.14	4.56	4.10
	22XXX	3.92	4.09	5.78	3.74	4.41
	26XXX	5.08	6.65	8.65	5.44	6.50
	29XXX	2.01	2.59	2.69	2.17	2.35
	ENTIRE A/C	2.81	3.23	3.28	3.33	3.17

	WUC	1/74 THRU 6/74	SH-36 7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4031.	3407.	3964.	2624.	14026.
AVG.#OF AC		22.30	22.90	24.00	20.20	22.35
NO OF FLTS		2234.	1896.	2218.	1648.	7996.
MA'S	14XXX	231	233	260	220	944
	15XXX	968	855	899	643	3365
	22XXX	798	643	740	658	2839
	26XXX	697	475	521	282	1975
	29XXX	428	303	360	302	1393
	ENTIRE A/C	13077	9681	10064	7831	40653
MFHBMA	14XXX	17.45	14.62	15.25	11.93	14.86
	15XXX	4.16	3.98	4.41	4.08	4.17
	22XXX	5.05	5.30	5.36	3.99	4.94
	26XXX	5.78	7.17	7.61	9.30	7.10
	29XXX	9.42	11.24	11.01	8.69	10.07
	ENTIRE A/C	0.31	0.35	0.39	0.34	0.35
FAILURES	14XXX	116	125	143	110	494
	15XXX	407	410	449	314	1580
	22XXX	363	259	304	276	1202
	26XXX	343	239	284	147	1013
	29XXX	202	145	167	167	681
	ENTIRE A/C	5891	4466	4695	3574	18626
MFHBF	14XXX	34.75	27.26	27.72	23.85	28.39
	15XXX	9.90	8.31	8.83	8.36	8.88
	22XXX	11.10	13.15	13.04	9.51	11.67
	26XXX	11.75	14.26	13.96	17.85	13.85
	29XXX	19.96	23.50	23.74	15.71	20.60
	ENTIRE A/C	0.68	0.76	0.84	0.73	0.75
MMH	14XXX	639	841	783	762	3025
	15XXX	3005	3315	3741	3158	13219
	22XXX	3131	2849	3551	4722	14253
	26XXX	3136	2489	2391	2809	10825
	29XXX	554	511	600	723	2388
	ENTIRE A/C	33868	29287	33993	32250	129398
MMH/FH	14XXX	0.16	0.25	0.20	0.29	0.22
	15XXX	0.75	0.97	0.94	1.20	0.94
	22XXX	0.78	0.84	0.90	1.80	1.02
	26XXX	0.78	0.73	0.60	1.07	0.77
	29XXX	0.14	0.15	0.15	0.28	0.17
	ENTIRE A/C	8.40	8.60	8.58	12.29	9.23
MMH/MA	14XXX	2.77	3.61	3.01	3.46	3.20
	15XXX	3.10	3.88	4.16	4.91	3.93
	22XXX	3.92	4.43	4.80	7.18	5.02
	26XXX	4.50	5.24	4.59	9.96	5.48
	29XXX	1.29	1.69	1.67	2.39	1.71
	ENTIRE A/C	2.59	3.03	3.38	4.12	3.18

	WUC	1/74 THRU 6/74	SH-3H 7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4020.	2971.	5002.	5433.	17426.
AVG.#OF AC		17.00	14.90	18.40	23.20	18.37
NO OF FLTS		1479.	1126.	1921.	2199.	6725.
MA'S	14XXX	107	131	206	245	689
	15XXX	467	484	869	891	2711
	22XXX	214	524	600	571	1909
	26XXX	170	187	390	347	1094
	29XXX	177	233	253	347	1010
	ENTIRE A/C	7239	7426	10468	12732	37865
MFHBMA	14XXX	37.57	22.68	24.28	22.18	25.29
	15XXX	8.61	6.14	5.76	6.10	6.43
	22XXX	18.79	5.67	8.34	9.51	9.13
	26XXX	23.65	15.89	12.83	15.66	15.93
	29XXX	22.71	12.75	19.77	15.66	17.25
	ENTIRE A/C	0.56	0.40	0.48	0.43	0.46
FAILURES	14XXX	59	55	96	132	342
	15XXX	266	234	417	449	1366
	22XXX	98	120	170	156	544
	26XXX	104	95	180	150	529
	29XXX	103	87	106	147	443
	ENTIRE A/C	3414	2832	4080	5312	15638
MFHPF	14XXX	68.14	54.02	52.10	41.16	50.95
	15XXX	15.11	12.70	12.00	12.10	12.76
	22XXX	41.02	24.76	29.42	34.83	32.03
	26XXX	38.65	31.27	27.79	36.22	32.94
	29XXX	39.03	34.15	47.19	36.96	39.34
	ENTIRE A/C	1.18	1.05	1.23	1.02	1.11
MMH	14XXX	364	296	438	621	1719
	15XXX	2444	2164	4270	4307	13185
	22XXX	1044	1651	2567	1583	6845
	26XXX	1455	994	2973	2224	7646
	29XXX	724	502	860	854	2940
	ENTIRE A/C	26842	21081	33663	40760	122346
MMH/FH	14XXX	0.09	0.10	0.09	0.11	0.10
	15XXX	0.61	0.73	0.85	0.79	0.76
	22XXX	0.26	0.56	0.51	0.29	0.39
	26XXX	0.36	0.33	0.59	0.41	0.44
	29XXX	0.18	0.17	0.17	0.16	0.17
	ENTIRE A/C	6.68	7.10	6.73	7.50	7.02
MMH/MA	14XXX	3.40	2.26	2.13	2.53	2.49
	15XXX	5.23	4.47	4.91	4.83	4.86
	22XXX	4.88	3.15	4.28	2.77	3.59
	26XXX	8.56	5.32	7.62	6.41	6.99
	29XXX	4.09	2.15	3.40	2.46	2.91
	ENTIRE A/C	3.71	2.84	3.22	3.20	3.23

CH-46D

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3255.	2267.	2888.	2515.	10925.
AVG.#OF AC		20.80	19.00	19.90	17.60	19.32
NO OF FLTS		2384.	2360.	2221.	2207.	9172.
MA'S	14XXX	367	329	330	572	1598
	15XXX	879	754	916	761	3310
	22XXX	251	339	380	511	1481
	26XXX	358	358	454	422	1592
	29XXX	330	341	517	363	1551
	ENTIRE A/C	7173	6619	8332	7895	30019
MFHRMA	14XXX	8.67	6.89	8.75	4.40	6.84
	15XXX	3.70	3.01	3.15	3.30	3.30
	22XXX	12.97	6.69	7.60	4.92	7.38
	26XXX	9.09	6.33	6.36	5.96	6.86
	29XXX	9.86	6.65	5.59	6.93	7.04
	ENTIRE A/C	0.45	0.34	0.35	0.32	0.36
FAILURES	14XXX	132	122	138	144	536
	15XXX	281	284	282	257	1104
	22XXX	103	133	145	185	566
	26XXX	147	146	183	178	654
	29XXX	120	129	172	119	540
	ENTIRE A/C	2937	2566	2744	2508	10755
MFHBF	14XXX	24.66	18.58	20.93	17.47	20.38
	15XXX	11.58	7.98	10.24	9.79	9.90
	22XXX	31.60	17.05	19.92	13.59	19.30
	26XXX	22.14	15.53	15.78	14.13	16.70
	29XXX	27.12	17.57	16.79	21.13	20.23
	ENTIRE A/C	1.11	0.88	1.05	1.00	1.02
MMH	14XXX	1281	1159	2019	1938	6397
	15XXX	2816	2137	3103	2953	11009
	22XXX	1876	2250	3617	2485	10228
	26XXX	2470	2039	2452	2700	9661
	29XXX	1098	696	1158	870	3822
	ENTIRE A/C	22485	17684	23911	21338	85418
MMH/FH	14XXX	0.39	0.51	0.70	0.77	0.59
	15XXX	0.87	0.94	1.07	1.17	1.01
	22XXX	0.58	0.99	1.25	0.99	0.94
	26XXX	0.76	0.90	0.85	1.07	0.88
	29XXX	0.34	0.31	0.40	0.35	0.35
	ENTIRE A/C	6.91	7.80	8.28	8.48	7.82
MMH/MA	14XXX	3.49	3.52	6.12	3.39	4.00
	15XXX	3.20	2.83	3.39	3.88	3.33
	22XXX	7.47	6.64	9.52	4.86	6.91
	26XXX	6.90	5.70	5.40	6.40	6.07
	29XXX	3.33	2.04	2.24	2.40	2.46
	ENTIRE A/C	3.13	2.67	2.87	2.70	2.85

CH-46F CNAL

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		168.	507.	428.	502.	1605.
AVG.#OF AC		1.00	2.80	3.00	3.60	2.60
NO OF FLTS		148.	361.	344.	333.	1186.
MA'S	14XXX	5	28	23	39	95
	15XXX	31	52	45	79	207
	22XXX	53	18	60	46	177
	26XXX	15	21	18	24	78
	29XXX	11	8	11	17	47
	ENTIRE A/C	254	429	397	589	1669
MFHBMA	14XXX	33.60	18.11	18.61	12.87	16.89
	15XXX	5.42	9.75	9.51	6.35	7.75
	22XXX	3.17	28.17	7.13	10.91	9.07
	26XXX	11.20	24.14	23.78	20.92	20.58
	29XXX	15.27	63.38	38.91	29.53	34.15
	ENTIRE A/C	0.66	1.18	1.08	0.85	0.96
FAILURES	14XXX	3	14	16	19	52
	15XXX	14	34	33	49	130
	22XXX	20	10	20	18	68
	26XXX	9	13	9	13	44
	29XXX	2	5	6	10	23
	ENTIRE A/C	120	241	198	356	915
MFHBF	14XXX	56.00	36.21	26.75	26.42	30.87
	15XXX	12.00	14.91	12.97	10.24	12.35
	22XXX	8.40	50.70	21.40	27.89	23.60
	26XXX	18.67	39.00	47.56	38.62	36.48
	29XXX	84.00	101.40	71.33	50.20	69.78
	ENTIRE A/C	1.40	2.10	2.16	1.41	1.75
MMH	14XXX	75	103	310	225	713
	15XXX	263	610	909	614	2396
	22XXX	932	205	817	522	2476
	26XXX	482	102	270	417	1271
	29XXX	51	53	140	47	291
	ENTIRE A/C	2392	2611	3477	3385	11865
MMH/FH	14XXX	0.45	0.20	0.72	0.45	0.44
	15XXX	1.57	1.20	2.12	1.22	1.49
	22XXX	5.55	0.40	1.91	1.04	1.54
	26XXX	2.87	0.20	0.63	0.83	0.79
	29XXX	0.30	0.10	0.33	0.09	0.18
	ENTIRE A/C	14.24	5.15	8.12	6.74	7.39
MMH/MA	14XXX	15.00	3.68	13.48	5.77	7.51
	15XXX	8.48	11.73	20.20	7.77	11.57
	22XXX	17.58	11.39	13.62	11.35	13.99
	26XXX	32.13	4.86	15.00	17.37	16.29
	29XXX	4.64	6.63	12.73	2.76	6.19
	ENTIRE A/C	9.42	6.09	8.76	5.75	7.11

	WUC	1/74 THRU 6/74	CH-53D 7/74 THRU 12/74	CNAL 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		162.	0.	0.	0.	162.
AVG.#OF AC		1.80	0.0	0.0	0.0	1.80
NO OF FLTS		94.	0.	0.	0.	94.
MA'S	14XXX	27	0	0	0	27
	15XXX	110	0	0	0	110
	22XXX	9	0	0	0	9
	26XXX	46	0	0	0	46
	29XXX	42	0	0	0	42
	ENTIRE A/C	598	0	0	0	598
MFHBMA	14XXX	6.00	0.0	0.0	0.0	6.00
	15XXX	1.47	0.0	0.0	0.0	1.47
	22XXX	18.00	0.0	0.0	0.0	18.00
	26XXX	3.52	0.0	0.0	0.0	3.52
	29XXX	3.86	0.0	0.0	0.0	3.86
	ENTIRE A/C	0.27	0.0	0.0	0.0	0.27
FAILURES	14XXX	12	0	0	0	12
	15XXX	57	0	0	0	57
	22XXX	4	0	0	0	4
	26XXX	15	0	0	0	15
	29XXX	21	0	0	0	21
	ENTIRE A/C	294	0	0	0	294
MFHRF	14XXX	13.50	0.0	0.0	0.0	13.50
	15XXX	2.84	0.0	0.0	0.0	2.84
	22XXX	40.50	0.0	0.0	0.0	40.50
	26XXX	10.80	0.0	0.0	0.0	10.80
	29XXX	7.71	0.0	0.0	0.0	7.71
	ENTIRE A/C	0.55	0.0	0.0	0.0	0.55
MMH	14XXX	78	0	0	0	78
	15XXX	300	0	0	0	300
	22XXX	13	0	0	0	13
	26XXX	61	0	0	0	61
	29XXX	122	0	0	0	122
	ENTIRE A/C	1635	0	0	0	1635
MMH/FH	14XXX	0.48	0.0	0.0	0.0	0.48
	15XXX	1.85	0.0	0.0	0.0	1.85
	22XXX	0.08	0.0	0.0	0.0	0.08
	26XXX	0.38	0.0	0.0	0.0	0.38
	29XXX	0.75	0.0	0.0	0.0	0.75
	ENTIRE A/C	10.09	0.0	0.0	0.0	10.09
MMH/MA	14XXX	2.89	0.0	0.0	0.0	2.89
	15XXX	2.73	0.0	0.0	0.0	2.73
	22XXX	1.44	0.0	0.0	0.0	1.44
	26XXX	1.33	0.0	0.0	0.0	1.33
	29XXX	2.90	0.0	0.0	0.0	2.90
	ENTIRE A/C	2.73	0.0	0.0	0.0	2.73

CH-53A CNAL

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		123.	38.	12.	12.	185.
AVG.#OF AC		4.00	2.60	1.90	0.90	2.35
NO OF FLTS		72.	22.	7.	8.	109.
MA'S	14XXX	56	15	24	16	111
	15XXX	121	40	23	29	213
	22XXX	41	2	1	1	45
	26XXX	126	41	21	25	213
	29XXX	94	19	2	24	139
	ENTIRE A/C	1186	361	224	253	2024
MFHBMA	14XXX	2.20	2.53	0.50	0.75	1.67
	15XXX	1.02	0.95	0.52	0.41	0.87
	22XXX	3.00	19.00	12.00	12.00	4.11
	26XXX	0.98	0.93	0.57	0.48	0.87
	29XXX	1.31	2.00	6.00	0.50	1.33
	ENTIRE A/C	0.10	0.11	0.05	0.05	0.09
FAILURES	14XXX	25	8	8	9	50
	15XXX	52	22	13	10	97
	22XXX	20	1	0	0	21
	26XXX	60	17	6	11	94
	29XXX	50	3	1	14	68
	ENTIRE A/C	559	163	92	118	932
MFHBF	14XXX	4.92	4.75	1.50	1.33	3.70
	15XXX	2.37	1.73	0.92	1.20	1.91
	22XXX	6.15	38.00	0.0	0.0	8.81
	26XXX	2.05	2.24	2.00	1.09	1.97
	29XXX	2.46	12.67	12.00	0.86	2.72
	ENTIRE A/C	0.22	0.23	0.13	0.10	0.20
MMH	14XXX	119	29	113	126	387
	15XXX	442	106	79	184	811
	22XXX	37	3	9	4	53
	26XXX	182	175	343	66	766
	29XXX	140	34	5	108	287
	ENTIRE A/C	2632	847	1245	1350	6074
MMH/FH	14XXX	0.97	0.76	9.42	10.50	2.09
	15XXX	3.59	2.79	6.58	15.33	4.38
	22XXX	0.30	0.08	0.75	0.33	0.29
	26XXX	1.48	4.61	28.58	5.50	4.14
	29XXX	1.14	0.89	0.42	9.00	1.55
	ENTIRE A/C	21.40	22.29	103.75	112.50	32.83
MMH/MA	14XXX	2.12	1.93	4.71	7.88	3.49
	15XXX	3.65	2.65	3.43	6.34	3.81
	22XXX	0.90	1.50	9.00	4.00	1.18
	26XXX	1.44	4.27	16.33	2.64	3.60
	29XXX	1.49	1.79	2.50	4.50	2.06
	ENTIRE A/C	2.22	2.35	5.56	5.34	3.00

AH-1J CNAP

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		71.	54.	107.	78.	310.
AVG.#OF AC		1.00	1.00	1.30	1.60	1.22
NO OF FLTS		43.	35.	76.	60.	214.
MA'S	14XXX	1	3	6	1	11
	15XXX	4	3	4	4	15
	22XXX	4	5	7	5	21
	26XXX	5	2	1	4	12
	29XXX	5	4	4	1	14
	ENTIRE A/C	86	67	85	70	308
MFHBMA	14XXX	71.00	18.00	17.83	78.00	28.18
	15XXX	17.75	18.00	26.75	19.50	20.67
	22XXX	17.75	10.80	15.29	15.60	14.76
	26XXX	14.20	27.00	107.00	19.50	25.83
	29XXX	14.20	13.50	26.75	78.00	22.14
	ENTIRE A/C	0.83	0.81	1.26	1.11	1.01
FAILURES	14XXX	0	2	5	0	7
	15XXX	0	2	4	1	7
	22XXX	3	2	5	5	15
	26XXX	2	0	1	1	4
	29XXX	3	2	4	0	9
	ENTIRE A/C	42	32	59	34	167
MFHBF	14XXX	0.0	27.00	21.40	0.0	44.29
	15XXX	0.0	27.00	26.75	78.00	44.29
	22XXX	23.67	27.00	21.40	15.60	20.67
	26XXX	35.50	0.0	107.00	78.00	77.50
	29XXX	23.67	27.00	26.75	0.0	34.44
	ENTIRE A/C	1.69	1.69	1.81	2.29	1.86
MMH	14XXX	1	4	36	0	41
	15XXX	1	30	4	150	185
	22XXX	4	9	34	19	66
	26XXX	14	29	3	5	51
	29XXX	5	9	9	7	30
	ENTIRE A/C	249	462	482	364	1557
MMH/FH	14XXX	0.01	0.07	0.34	0.0	0.13
	15XXX	0.01	0.56	0.04	1.92	0.60
	22XXX	0.06	0.17	0.32	0.24	0.21
	26XXX	0.20	0.54	0.03	0.06	0.16
	29XXX	0.07	0.17	0.08	0.09	0.10
	ENTIRE A/C	3.51	8.56	4.50	4.67	5.02
MMH/MA	14XXX	1.00	1.33	6.00	0.0	3.73
	15XXX	0.25	10.00	1.00	37.50	12.33
	22XXX	1.00	1.80	4.86	3.80	3.14
	26XXX	2.80	14.50	3.00	1.25	4.25
	29XXX	1.00	2.25	2.25	7.00	2.14
	ENTIRE A/C	2.90	6.90	5.67	5.20	5.06

UH-1N CNAP

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		1645.	1573.	1586.	1356.	6160.
AVG.#OF AC		8.30	9.60	12.80	13.40	11.02
NO OF FLTS		1160.	1048.	1083.	1439.	4730.
MA'S	14XXX	78	103	156	130	467
	15XXX	94	122	193	218	627
	22XXX	101	154	165	153	573
	26XXX	62	98	137	113	410
	29XXX	105	135	159	182	581
	ENTIRE A/C	1277	1465	2042	2222	7006
MFHRMA	14XXX	21.09	15.27	10.17	10.43	13.19
	15XXX	17.50	12.89	8.22	6.22	9.82
	22XXX	16.29	10.21	9.61	8.86	10.75
	26XXX	26.53	16.05	11.58	12.00	15.02
	29XXX	15.67	11.65	9.97	7.45	10.60
	ENTIRE A/C	1.29	1.07	0.78	0.61	0.88
FAILURES	14XXX	38	45	65	44	192
	15XXX	45	72	87	84	288
	22XXX	63	105	100	66	334
	26XXX	35	56	66	53	210
	29XXX	60	76	81	94	311
	ENTIRE A/C	640	751	862	908	3161
MFHBF	14XXX	43.29	34.96	24.40	30.82	32.08
	15XXX	36.56	21.85	18.23	16.14	21.39
	22XXX	26.11	14.98	15.86	20.55	18.44
	26XXX	47.00	28.09	24.03	25.58	29.33
	29XXX	27.42	20.70	19.58	14.43	19.81
	ENTIRE A/C	2.57	2.09	1.84	1.49	1.95
MMH	14XXX	325	730	863	819	2737
	15XXX	538	872	1373	1086	3869
	22XXX	1401	2167	1144	778	5490
	26XXX	395	420	732	374	1921
	29XXX	440	487	696	627	2250
	ENTIRE A/C	6256	7238	8316	8491	30301
MMH/FH	14XXX	0.20	0.46	0.54	0.60	0.44
	15XXX	0.33	0.55	0.87	0.80	0.63
	22XXX	0.85	1.38	0.72	0.57	0.89
	26XXX	0.24	0.27	0.46	0.28	0.31
	29XXX	0.27	0.31	0.44	0.46	0.37
	ENTIRE A/C	3.80	4.60	5.24	6.26	4.92
MMH/MA	14XXX	4.17	7.09	5.53	6.30	5.86
	15XXX	5.72	7.15	7.11	4.98	6.17
	22XXX	13.87	14.07	6.93	5.08	9.58
	26XXX	6.37	4.29	5.34	3.31	4.69
	29XXX	4.19	3.71	4.38	3.45	3.87
	ENTIRE A/C	4.90	4.94	4.07	3.82	4.33

	WUC	1/74 THRU 6/74	SH-2F 7/74 THRU 12/74	CNAP 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4084.	4003.	4881.	5038.	18006.
AVG.#OF AC		20.20	24.80	28.10	30.80	25.97
NO OF FLTS		2485.	2574.	3625.	3456.	12140.
MA'S	14XXX	389	436	454	497	1776
	15XXX	786	905	1038	988	3717
	22XXX	867	1058	1000	1058	3983
	26XXX	780	813	910	743	3246
	29XXX	526	683	488	686	2383
	ENTIRE A/C	10497	11288	12114	13361	47260
MFHBMA	14XXX	10.50	9.18	10.75	10.14	10.14
	15XXX	5.20	4.42	4.70	5.10	4.84
	22XXX	4.71	3.78	4.88	4.76	4.52
	26XXX	5.24	4.92	5.36	6.78	5.55
	29XXX	7.76	5.86	10.00	7.34	7.56
	ENTIRE A/C	0.39	0.35	0.40	0.38	0.38
FAILURES	14XXX	155	193	214	188	750
	15XXX	349	462	547	564	1922
	22XXX	497	500	567	630	2194
	26XXX	379	391	470	388	1628
	29XXX	271	304	253	337	1165
	ENTIRE A/C	4677	5301	5736	6349	22063
MFHBF	14XXX	26.35	20.74	22.81	26.80	24.01
	15XXX	11.70	8.66	8.92	8.93	9.37
	22XXX	8.22	8.01	8.61	8.00	8.21
	26XXX	10.78	10.24	10.39	12.98	11.06
	29XXX	15.07	13.17	19.29	14.95	15.46
	ENTIRE A/C	0.87	0.76	0.85	0.79	0.82
MMH	14XXX	1035	1861	2124	2218	7238
	15XXX	1439	1900	2688	3241	9268
	22XXX	2013	3399	2502	4366	12280
	26XXX	1561	2165	3099	2455	9280
	29XXX	1335	2142	1608	2525	7610
	ENTIRE A/C	23664	30823	34770	41637	130894
MMH/FH	14XXX	0.25	0.46	0.44	0.44	0.40
	15XXX	0.35	0.47	0.55	0.64	0.51
	22XXX	0.49	0.85	0.51	0.87	0.68
	26XXX	0.38	0.54	0.63	0.49	0.52
	29XXX	0.33	0.54	0.33	0.50	0.42
	ENTIRE A/C	5.79	7.70	7.12	8.26	7.27
MMH/MA	14XXX	2.66	4.27	4.68	4.46	4.08
	15XXX	1.83	2.10	2.59	3.28	2.49
	22XXX	2.32	3.21	2.50	4.13	3.08
	26XXX	2.00	2.66	3.41	3.30	2.86
	29XXX	2.54	3.14	3.30	3.68	3.19
	ENTIRE A/C	2.25	2.73	2.87	3.12	2.77

	WUC	1/74 THRU 6/74	SH-3A 7/74 THRU 12/74	CNAP 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3001.	3069.	2401.	2914.	11385.
AVG.#OF AC		12.80	11.60	11.50	11.60	11.87
NO OF FLTS		1344.	1281.	1125.	1308.	5058.
MA'S	14XXX	156	125	204	218	703
	15XXX	382	514	679	591	2166
	22XXX	312	578	506	520	1916
	26XXX	249	271	322	298	1140
	29XXX	206	205	304	270	985
	ENTIRE A/C	6266	7054	7482	7654	28456
MFHBMA	14XXX	19.24	24.55	11.77	13.37	16.19
	15XXX	7.86	5.97	3.54	4.93	5.26
	22XXX	9.62	5.31	4.75	5.60	5.94
	26XXX	12.05	11.32	7.46	9.78	9.99
	29XXX	14.57	14.97	7.90	10.79	11.56
	ENTIRE A/C	0.48	0.44	0.32	0.38	0.40
FAILURES	14XXX	102	66	132	133	433
	15XXX	189	266	329	276	1060
	22XXX	178	185	267	255	885
	26XXX	126	128	149	168	571
	29XXX	115	106	165	140	526
	ENTIRE A/C	3026	3307	3750	3677	13760
MFHBF	14XXX	29.42	46.50	18.19	21.91	26.29
	15XXX	15.88	11.54	7.30	10.56	10.74
	22XXX	16.86	16.59	8.99	11.43	12.86
	26XXX	23.82	23.98	16.11	17.35	19.94
	29XXX	26.10	28.95	14.55	20.81	21.64
	ENTIRE A/C	0.99	0.93	0.64	0.79	0.83
MMH	14XXX	453	551	908	736	2648
	15XXX	1478	2168	2981	2198	8825
	22XXX	1977	2591	2438	2310	9316
	26XXX	1374	1384	2046	1021	5825
	29XXX	469	456	696	442	2063
	ENTIRE A/C	21213	23960	25370	22501	93044
MMH/FH	14XXX	0.15	0.18	0.38	0.25	0.23
	15XXX	0.49	0.71	1.24	0.75	0.78
	22XXX	0.66	0.84	1.02	0.79	0.82
	26XXX	0.46	0.45	0.85	0.35	0.51
	29XXX	0.16	0.15	0.29	0.15	0.18
	ENTIRE A/C	7.07	7.81	10.57	7.72	8.17
MMH/MA	14XXX	2.90	4.41	4.45	3.38	3.77
	15XXX	3.87	4.22	4.39	3.72	4.07
	22XXX	6.34	4.48	4.82	4.44	4.86
	26XXX	5.52	5.11	6.35	3.43	5.11
	29XXX	2.28	2.22	2.29	1.64	2.09
	ENTIRE A/C	3.39	3.40	3.39	2.94	3.27

	WUC	1/74 THRU 6/74	SH-3D 7/74 THRU 12/74	CNAP 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		5003.	4521.	4596.	5046.	19166.
AVG.#OF AC		20.90	23.90	25.60	24.70	23.77
NO OF FLTS		1931.	2237.	2012.	2104.	8284.
MA'S	14XXX	235	272	254	328	1089
	15XXX	729	842	1007	1259	3837
	22XXX	423	407	321	625	1776
	26XXX	320	306	392	456	1474
	29XXX	356	279	318	461	1414
	ENTIRE A/C	9775	9983	11127	14044	44929
MFHBMA	14XXX	21.29	16.62	18.09	15.38	17.60
	15XXX	6.86	5.37	4.56	4.01	5.00
	22XXX	11.83	11.11	14.32	8.07	10.79
	26XXX	15.63	14.77	11.72	11.07	13.00
	29XXX	14.05	16.20	14.45	10.95	13.55
	ENTIRE A/C	0.51	0.45	0.41	0.36	0.43
FAILURES	14XXX	161	179	162	200	702
	15XXX	387	430	527	686	2030
	22XXX	182	177	148	324	831
	26XXX	148	174	204	224	750
	29XXX	196	142	164	233	735
	ENTIRE A/C	4919	4722	5493	6776	21910
MFHBF	14XXX	31.07	25.26	28.37	25.23	27.30
	15XXX	12.93	10.51	8.72	7.36	9.44
	22XXX	27.49	25.54	31.05	15.57	23.06
	26XXX	33.80	25.98	22.53	22.53	25.55
	29XXX	25.53	31.84	28.02	21.66	26.08
	ENTIRE A/C	1.02	0.96	0.84	0.74	0.87
MMH	14XXX	720	727	730	1046	3223
	15XXX	3483	4593	5404	5532	19012
	22XXX	2938	3061	2251	4040	12290
	26XXX	2290	2265	3995	2515	11065
	29XXX	907	683	944	1272	3806
	ENTIRE A/C	33806	35776	40650	53597	163829
MMH/FH	14XXX	0.14	0.16	0.16	0.21	0.17
	15XXX	0.70	1.02	1.18	1.10	0.99
	22XXX	0.59	0.68	0.49	0.80	0.64
	26XXX	0.46	0.50	0.87	0.50	0.58
	29XXX	0.18	0.15	0.21	0.25	0.20
	ENTIRE A/C	6.76	7.91	8.84	10.62	8.55
MMH/MA	14XXX	3.06	2.67	2.87	3.19	2.96
	15XXX	4.78	5.45	5.37	4.39	4.95
	22XXX	6.95	7.52	7.01	6.46	6.92
	26XXX	7.16	7.40	10.19	5.52	7.51
	29XXX	2.55	2.45	2.97	2.76	2.69
	ENTIRE A/C	3.46	3.58	3.65	3.82	3.65

SH-3G CNAP

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		5482.	4835.	6034.	3825.	20176.
AVG.#OF AC		27.30	27.40	25.90	19.60	25.05
NO OF FLTS		2948.	2565.	2968.	2034.	10515.
MA'S	14XXX	230	297	285	244	1056
	15XXX	920	925	1213	938	3996
	22XXX	696	751	831	642	2920
	26XXX	629	524	767	578	2498
	29XXX	449	429	526	409	1813
	ENTIRE A/C	12954	13021	14436	12116	52527
MFHBMA	14XXX	23.83	16.28	21.17	15.68	19.11
	15XXX	5.96	5.23	4.97	4.08	5.05
	22XXX	7.88	6.44	7.26	5.96	6.91
	26XXX	8.72	9.23	7.87	6.62	8.08
	29XXX	12.21	11.27	11.47	9.35	11.13
	ENTIRE A/C	0.42	0.37	0.42	0.32	0.38
FAILURES	14XXX	142	185	169	131	627
	15XXX	473	460	533	402	1868
	22XXX	367	338	376	268	1349
	26XXX	313	259	348	290	1210
	29XXX	231	240	254	187	912
	ENTIRE A/C	6092	6009	6568	5121	23790
MFHBF	14XXX	38.61	26.14	35.70	29.20	32.18
	15XXX	11.59	10.51	11.32	9.51	10.80
	22XXX	14.94	14.30	16.05	14.27	14.96
	26XXX	17.51	18.67	17.34	13.19	16.67
	29XXX	23.73	20.15	23.76	20.45	22.12
	ENTIRE A/C	0.90	0.80	0.92	0.75	0.85
MMH	14XXX	622	1200	956	957	3735
	15XXX	4176	4778	7728	4648	21330
	22XXX	3765	3917	4385	3107	15174
	26XXX	4297	2546	4736	3164	14743
	29XXX	1031	1072	1182	788	4073
	ENTIRE A/C	47534	51893	60568	43510	203505
MMH/FH	14XXX	0.11	0.25	0.16	0.25	0.19
	15XXX	0.76	0.99	1.28	1.22	1.06
	22XXX	0.69	0.81	0.73	0.81	0.75
	26XXX	0.78	0.53	0.78	0.83	0.73
	29XXX	0.19	0.22	0.20	0.21	0.20
	ENTIRE A/C	8.67	10.73	10.04	11.38	10.09
MMH/MA	14XXX	2.70	4.04	3.35	3.92	3.54
	15XXX	4.54	5.17	6.37	4.96	5.34
	22XXX	5.41	5.22	5.28	4.84	5.20
	26XXX	6.83	4.86	6.17	5.47	5.90
	29XXX	2.30	2.50	2.25	1.93	2.25
	ENTIRE A/C	3.67	3.99	4.20	3.59	3.87

CH-46D CNAP

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4551.	4572.	5259.	4347.	18729.
AVG.#OF AC		24.20	25.70	32.20	33.00	28.77
NO OF FLTS		3557.	3593.	4212.	3604.	14966.
MA'S	14XXX	585	757	824	739	2905
	15XXX	1098	1285	1328	1641	5352
	22XXX	360	533	636	654	2183
	26XXX	437	469	781	626	2313
	29XXX	381	429	622	559	1991
	ENTIRE A/C	8156	9895	12107	12199	42357
MFHBMA	14XXX	7.78	6.04	6.38	5.88	6.45
	15XXX	4.14	3.56	3.96	2.65	3.50
	22XXX	12.64	8.58	8.27	6.65	8.58
	26XXX	10.41	9.75	6.73	6.94	8.10
	29XXX	11.94	10.66	8.45	7.78	9.41
	ENTIRE A/C	0.56	0.46	0.43	0.36	0.44
FAILURES	14XXX	262	304	314	277	1157
	15XXX	526	592	669	912	2699
	22XXX	177	250	296	311	1034
	26XXX	233	277	461	351	1322
	29XXX	171	157	291	236	855
	ENTIRE A/C	4152	4700	5922	6113	20887
MFHBF	14XXX	17.37	15.04	16.75	15.69	16.19
	15XXX	8.65	7.72	7.86	4.77	6.94
	22XXX	25.71	18.29	17.77	13.98	18.11
	26XXX	19.53	16.51	11.41	12.38	14.17
	29XXX	26.61	29.12	18.07	18.42	21.91
	ENTIRE A/C	1.10	0.97	0.89	0.71	0.90
MMH	14XXX	2451	3352	4455	3932	14190
	15XXX	4739	5203	5688	6824	22454
	22XXX	2295	3244	4416	3840	13795
	26XXX	3596	3171	6094	3926	16787
	29XXX	1353	1041	2420	1498	6312
	ENTIRE A/C	31856	34955	48818	47979	163618
MMH/FH	14XXX	0.54	0.73	0.85	0.90	0.76
	15XXX	1.04	1.14	1.08	1.57	1.20
	22XXX	0.50	0.71	0.84	0.88	0.74
	26XXX	0.79	0.69	1.16	0.90	0.90
	29XXX	0.30	0.23	0.46	0.34	0.34
	ENTIRE A/C	7.00	7.65	9.28	11.04	8.74
MMH/MA	14XXX	4.19	4.43	5.41	5.32	4.88
	15XXX	4.32	4.05	4.28	4.16	4.20
	22XXX	6.37	6.09	6.94	5.87	6.32
	26XXX	8.23	6.76	7.80	6.27	7.26
	29XXX	3.55	2.43	3.89	2.68	3.17
	ENTIRE A/C	3.91	3.53	4.03	3.93	3.86

AH-1J FMFLANT

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2529.	2847.	3704.	3768.	12848.
AVG.#OF AC		20.40	22.90	21.10	21.60	21.50
NO OF FLTS		1971.	2514.	2722.	2424.	9631.
MA'S	14XXX	346	302	344	470	1462
	15XXX	402	397	576	622	1997
	22XXX	867	535	605	674	2681
	26XXX	182	286	362	448	1278
	29XXX	405	350	499	547	1801
	ENTIRE A/C	4850	4338	6321	6603	22112
MFHBMA	14XXX	7.31	9.43	10.77	8.02	8.79
	15XXX	6.29	7.17	6.43	6.06	6.43
	22XXX	2.92	5.32	6.12	5.59	4.79
	26XXX	13.90	9.95	10.23	8.41	10.05
	29XXX	6.24	8.13	7.42	6.89	7.13
	ENTIRE A/C	0.52	0.66	0.59	0.57	0.58
FAILURES	14XXX	210	189	221	254	874
	15XXX	226	199	261	278	964
	22XXX	629	356	392	402	1779
	26XXX	110	158	163	213	644
	29XXX	322	244	283	341	1190
	ENTIRE A/C	3063	2474	3230	3425	12192
MFHRF	14XXX	12.04	15.06	16.76	14.83	14.70
	15XXX	11.19	14.31	14.19	13.55	13.33
	22XXX	4.02	8.00	9.45	9.37	7.22
	26XXX	22.99	18.02	22.72	17.69	19.95
	29XXX	7.85	11.67	13.09	11.05	10.80
	ENTIRE A/C	0.83	1.15	1.15	1.10	1.05
MMH	14XXX	1525	1639	1455	1715	6334
	15XXX	1868	1801	2486	2097	8252
	22XXX	6831	4118	3637	2249	16835
	26XXX	915	1039	1278	1803	5035
	29XXX	924	952	1163	1284	4323
	ENTIRE A/C	21573	18765	21335	19609	81282
MMH/FH	14XXX	0.60	0.58	0.39	0.46	0.49
	15XXX	0.74	0.63	0.67	0.56	0.64
	22XXX	2.70	1.45	0.98	0.60	1.31
	26XXX	0.36	0.36	0.35	0.48	0.39
	29XXX	0.37	0.33	0.31	0.34	0.34
	ENTIRE A/C	8.53	6.59	5.76	5.20	6.33
MMH/MA	14XXX	4.41	5.43	4.23	3.65	4.33
	15XXX	4.65	4.54	4.32	3.37	4.13
	22XXX	7.88	7.70	6.01	3.34	6.28
	26XXX	5.03	3.63	3.53	4.02	3.94
	29XXX	2.28	2.72	2.33	2.35	2.40
	ENTIRE A/C	4.45	4.33	3.38	2.97	3.68

UH-1N FMFLANT

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		6317.	4537.	6191.	6600.	23645.
AVG.#OF AC		44.00	48.90	46.50	52.30	47.92
NO OF FLTS		5280.	5809.	5552.	5178.	21819.
MA'S	14XXX	337	197	497	517	1548
	15XXX	472	364	1074	1395	3305
	22XXX	510	354	698	500	2062
	26XXX	286	171	423	591	1471
	29XXX	313	236	547	414	1510
	ENTIRE A/C	4236	2965	6578	6384	20163
MFHBMA	14XXX	18.74	23.03	12.46	12.77	15.27
	15XXX	13.38	12.46	5.76	4.73	7.15
	22XXX	12.39	12.82	8.87	13.20	11.47
	26XXX	22.09	26.53	14.64	11.17	16.07
	29XXX	20.18	19.22	11.32	15.94	15.66
	ENTIRE A/C	1.49	1.53	0.94	1.03	1.17
FAILURES	14XXX	225	135	323	286	969
	15XXX	228	156	362	351	1097
	22XXX	334	228	394	347	1303
	26XXX	170	90	178	213	651
	29XXX	227	172	384	286	1069
	ENTIRE A/C	2591	1737	3481	3162	10971
MFHBF	14XXX	28.08	33.61	19.17	23.08	24.40
	15XXX	27.71	29.08	17.10	18.80	21.55
	22XXX	18.91	19.90	15.71	19.02	18.15
	26XXX	37.16	50.41	34.78	30.99	36.32
	29XXX	27.83	26.38	16.12	23.08	22.12
	ENTIRE A/C	2.44	2.61	1.78	2.09	2.16
MMH	14XXX	1534	894	2939	2917	8284
	15XXX	1003	961	3223	3433	8620
	22XXX	3578	3585	4601	3746	15510
	26XXX	980	909	1913	2202	6004
	29XXX	822	511	2059	1288	4680
	ENTIRE A/C	15446	12312	24133	21998	73889
MMH/FH	14XXX	0.24	0.20	0.47	0.44	0.35
	15XXX	0.16	0.21	0.52	0.52	0.36
	22XXX	0.57	0.79	0.74	0.57	0.66
	26XXX	0.16	0.20	0.31	0.33	0.25
	29XXX	0.13	0.11	0.33	0.20	0.20
	ENTIRE A/C	2.45	2.71	3.90	3.33	3.12
MMH/MA	14XXX	4.55	4.54	5.91	5.64	5.35
	15XXX	2.12	2.64	3.00	2.46	2.61
	22XXX	7.02	10.13	6.59	7.49	7.52
	26XXX	3.43	5.32	4.52	3.73	4.08
	29XXX	2.63	2.17	3.76	3.11	3.10
	ENTIRE A/C	3.65	4.15	3.67	3.45	3.66

CH-46F FMFLANT

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		9187.	7626.	8646.	6828.	32287.
AVG.#OF AC		81.90	60.20	67.10	73.00	70.55
NO OF FLTS		5700.	6249.	6482.	4862.	23293.
MA'S	14XXX	1232	975	1161	833	4201
	15XXX	4088	2334	2901	2094	11417
	22XXX	734	590	920	789	3033
	26XXX	1014	786	1085	889	3774
	29XXX	814	617	1086	834	3351
	ENTIRE A/C	18488	13366	17744	13662	63260
MFHRMA	14XXX	7.46	7.82	7.45	8.20	7.69
	15XXX	2.25	3.27	2.98	3.26	2.83
	22XXX	12.52	12.93	9.40	8.65	10.65
	26XXX	9.06	9.70	7.97	7.68	8.56
	29XXX	11.29	12.36	7.96	8.19	9.64
	ENTIRE A/C	0.50	0.57	0.49	0.50	0.51
FAILURES	14XXX	641	484	578	428	2131
	15XXX	1434	1025	1456	1009	4924
	22XXX	373	274	408	320	1375
	26XXX	567	458	613	453	2091
	29XXX	417	317	513	419	1666
	ENTIRE A/C	9776	7372	9572	7265	33985
MFHRF	14XXX	14.33	15.76	14.96	15.95	15.15
	15XXX	6.41	7.44	5.94	6.77	6.56
	22XXX	24.63	27.83	21.19	21.34	23.48
	26XXX	16.20	16.65	14.10	15.07	15.44
	29XXX	22.03	24.06	16.85	16.30	19.38
	ENTIRE A/C	0.94	1.03	0.90	0.94	0.95
MMH	14XXX	4685	3503	5457	3723	17368
	15XXX	19679	11536	14431	9130	54776
	22XXX	7509	7063	8291	8658	31521
	26XXX	6834	5011	5860	5461	23166
	29XXX	2496	1944	3177	2454	10071
	ENTIRE A/C	76421	58714	75172	60357	270664
MMH/FH	14XXX	0.51	0.46	0.63	0.55	0.54
	15XXX	2.14	1.51	1.67	1.34	1.70
	22XXX	0.82	0.93	0.96	1.27	0.98
	26XXX	0.74	0.66	0.68	0.80	0.72
	29XXX	0.27	0.25	0.37	0.36	0.31
	ENTIRE A/C	8.32	7.70	8.69	8.84	8.38
MMH/MA	14XXX	3.80	3.59	4.70	4.47	4.13
	15XXX	4.81	4.94	4.97	4.36	4.80
	22XXX	10.23	11.97	9.01	10.97	10.39
	26XXX	6.74	6.38	5.40	6.14	6.14
	29XXX	3.07	3.15	2.93	2.94	3.01
	ENTIRE A/C	4.13	4.39	4.24	4.42	4.28

CH-53D FMFLANT

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		7156.	5415.	3688.	4073.	20332.
AVG.#OF AC		48.10	44.60	46.50	48.00	46.80
NO OF FLTS		3665.	3987.	2595.	2477.	12724.
MA'S	14XXX	1122	810	1144	795	3871
	15XXX	2066	1381	2066	1445	6958
	22XXX	693	332	501	320	1846
	26XXX	1219	710	1015	528	3472
	29XXX	879	458	834	482	2653
	ENTIRE A/C	15551	9447	12203	8871	46072
MFHBMA	14XXX	6.38	6.69	3.22	5.12	5.25
	15XXX	3.46	3.92	1.79	2.82	2.92
	22XXX	10.33	16.31	7.36	12.73	11.01
	26XXX	5.87	7.63	3.63	7.71	5.86
	29XXX	8.14	11.82	4.42	8.45	7.66
	ENTIRE A/C	0.46	0.57	0.30	0.46	0.44
FAILURES	14XXX	727	534	656	469	2386
	15XXX	1280	844	907	717	3748
	22XXX	373	181	236	179	969
	26XXX	796	459	603	348	2206
	29XXX	563	288	442	272	1565
	ENTIRE A/C	10046	5851	6431	5118	27446
MFHBF	14XXX	9.84	10.14	5.62	8.68	8.52
	15XXX	5.59	6.42	4.07	5.68	5.42
	22XXX	19.18	29.92	15.63	22.75	20.98
	26XXX	8.99	11.80	6.12	11.70	9.22
	29XXX	12.71	18.80	8.34	14.97	12.99
	ENTIRE A/C	0.71	0.93	0.57	0.80	0.74
MMH	14XXX	4002	3575	4758	4859	17194
	15XXX	10190	7681	11130	12327	41328
	22XXX	3073	2361	2553	1460	9447
	26XXX	5002	3523	5096	3452	17073
	29XXX	2309	1314	3821	2636	10080
	ENTIRE A/C	57049	41367	55532	49863	203811
MMH/FH	14XXX	0.56	0.66	1.29	1.19	0.85
	15XXX	1.42	1.42	3.02	3.03	2.03
	22XXX	0.43	0.44	0.69	0.36	0.46
	26XXX	0.70	0.65	1.38	0.85	0.84
	29XXX	0.32	0.24	1.04	0.65	0.50
	ENTIRE A/C	7.97	7.64	15.06	12.24	10.02
MMH/MA	14XXX	3.57	4.41	4.16	6.11	4.44
	15XXX	4.93	5.56	5.39	8.53	5.94
	22XXX	4.43	7.11	5.10	4.56	5.12
	26XXX	4.10	4.96	5.02	6.54	4.92
	29XXX	2.63	2.87	4.58	5.47	3.80
	ENTIRE A/C	3.67	4.38	4.55	5.62	4.42

CH-53A FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4176.	3055.	2771.	3753.	13755.
AVG.#OF AC		32.70	38.30	36.20	34.10	35.32
NO OF FLTS		2394.	1655.	1564.	2066.	7679.
MA'S	14XXX	1050	860	870	797	3577
	15XXX	1002	853	739	798	3392
	22XXX	685	356	221	340	1602
	26XXX	1134	650	502	481	2767
	29XXX	991	596	454	409	2450
	ENTIRE A/C	13835	8062	7172	7430	36499
MFHRMA	14XXX	3.98	3.55	3.19	4.71	3.85
	15XXX	4.17	3.58	3.75	4.70	4.06
	22XXX	6.10	8.58	12.54	11.04	8.59
	26XXX	3.68	4.70	5.52	7.80	4.97
	29XXX	4.21	5.13	6.10	9.18	5.61
	ENTIRE A/C	0.30	0.38	0.39	0.51	0.38
FAILURES	14XXX	474	415	392	380	1661
	15XXX	452	388	375	356	1571
	22XXX	319	190	116	181	806
	26XXX	512	352	284	284	1432
	29XXX	465	311	218	220	1214
	ENTIRE A/C	6570	4518	3712	3915	18715
MFHBF	14XXX	8.81	7.36	7.07	9.88	8.28
	15XXX	9.24	7.87	7.39	10.54	8.76
	22XXX	13.09	16.08	23.89	20.73	17.07
	26XXX	8.16	8.68	9.76	13.21	9.61
	29XXX	8.98	9.82	12.71	17.06	11.33
	ENTIRE A/C	0.64	0.68	0.75	0.96	0.73
MMH	14XXX	2928	4811	5005	4311	17055
	15XXX	4920	5777	6077	7427	24201
	22XXX	2674	3823	2342	3459	12298
	26XXX	3006	2602	2647	3500	11755
	29XXX	2419	2137	1745	1975	8276
	ENTIRE A/C	40901	39922	37248	40737	158808
MMH/FH	14XXX	0.70	1.57	1.81	1.15	1.24
	15XXX	1.18	1.89	2.19	1.98	1.76
	22XXX	0.64	1.25	0.85	0.92	0.89
	26XXX	0.72	0.85	0.96	0.93	0.85
	29XXX	0.58	0.70	0.63	0.53	0.60
	ENTIRE A/C	9.79	13.07	13.44	10.85	11.55
MMH/MA	14XXX	2.79	5.59	5.75	5.41	4.77
	15XXX	4.91	6.77	8.22	9.31	7.13
	22XXX	3.90	10.74	10.60	10.17	7.68
	26XXX	2.65	4.00	5.27	7.28	4.25
	29XXX	2.44	3.59	3.84	4.83	3.38
	ENTIRE A/C	2.96	4.95	5.19	5.48	4.35

CH-53D FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3824.	5386.	3165.	3821.	16196.
AVG.#OF AC		36.50	36.60	37.10	33.20	35.85
NO OF FLTS		2847.	3206.	1781.	3028.	10862.
MA'S	14XXX	903	1237	801	974	3915
	15XXX	1293	1355	1197	1486	5331
	22XXX	234	416	273	435	1358
	26XXX	808	868	596	680	2952
	29XXX	636	910	506	653	2705
	ENTIRE A/C	10702	13458	8757	10068	42985
MFHBMA	14XXX	4.23	4.35	3.95	3.92	4.14
	15XXX	2.96	3.97	2.64	2.57	3.04
	22XXX	16.34	12.95	11.59	8.78	11.93
	26XXX	4.73	6.21	5.31	5.62	5.49
	29XXX	6.01	5.92	6.25	5.85	5.99
	ENTIRE A/C	0.36	0.40	0.36	0.38	0.38
FAILURES	14XXX	510	754	427	518	2209
	15XXX	725	763	643	790	2921
	22XXX	121	199	107	288	715
	26XXX	489	521	323	399	1732
	29XXX	319	495	219	319	1352
	ENTIRE A/C	5810	7320	4341	5507	22978
MFHBF	14XXX	7.50	7.14	7.41	7.38	7.33
	15XXX	5.27	7.06	4.92	4.84	5.54
	22XXX	31.60	27.07	29.58	13.27	22.65
	26XXX	7.82	10.34	9.80	9.58	9.35
	29XXX	11.99	10.88	14.45	11.98	11.98
	ENTIRE A/C	0.66	0.74	0.73	0.69	0.70
MMH	14XXX	4313	5652	4704	4213	18882
	15XXX	8478	9054	7678	10293	35503
	22XXX	1184	2521	1253	1969	6927
	26XXX	5093	3786	2638	4429	15946
	29XXX	1654	2457	2143	3223	9477
	ENTIRE A/C	45030	55000	38731	48370	187131
MMH/FH	14XXX	1.13	1.05	1.49	1.10	1.17
	15XXX	2.22	1.68	2.43	2.69	2.19
	22XXX	0.31	0.47	0.40	0.52	0.43
	26XXX	1.33	0.70	0.83	1.16	0.98
	29XXX	0.43	0.46	0.68	0.84	0.59
	ENTIRE A/C	11.78	10.21	12.24	12.66	11.55
MMH/MA	14XXX	4.78	4.57	5.87	4.33	4.82
	15XXX	6.56	6.68	6.41	6.93	6.66
	22XXX	5.06	6.06	4.59	4.53	5.10
	26XXX	6.30	4.36	4.43	6.51	5.40
	29XXX	2.60	2.70	4.24	4.94	3.50
	ENTIRE A/C	4.21	4.09	4.42	4.80	4.35

CH-46F FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3810.	6275.	8062.	8360.	26507.
AVG.#OF AC		9.50	27.50	49.30	49.70	34.00
NO OF FLTS		2565.	3812.	4881.	5069.	16327.
MA'S	14XXX	622	734	743	781	2880
	15XXX	1615	1993	1603	1632	6843
	22XXX	504	578	661	703	2446
	26XXX	556	581	782	788	2707
	29XXX	423	575	595	577	2170
	ENTIRE A/C	10600	12892	12728	12827	49047
MFHRMA	14XXX	6.13	8.55	10.85	10.70	9.20
	15XXX	2.36	3.15	5.03	5.12	3.87
	22XXX	7.56	10.86	12.20	11.89	10.84
	26XXX	6.85	10.80	10.31	10.61	9.79
	29XXX	9.01	10.91	13.55	14.49	12.22
	ENTIRE A/C	0.36	0.49	0.63	0.65	0.54
FAILURES	14XXX	289	404	367	353	1433
	15XXX	490	752	789	750	2781
	22XXX	218	295	255	299	1067
	26XXX	261	313	421	440	1435
	29XXX	173	258	302	299	1032
	ENTIRE A/C	4963	6700	6858	6558	25079
MFHRF	14XXX	13.18	15.53	20.83	23.68	18.50
	15XXX	7.78	8.34	10.22	11.15	9.53
	22XXX	17.48	21.27	31.62	27.96	24.84
	26XXX	14.60	20.05	19.15	19.00	18.47
	29XXX	22.02	24.32	26.70	27.96	25.69
	ENTIRE A/C	0.77	0.94	1.18	1.27	1.06
MMH	14XXX	2137	2670	3495	3534	11836
	15XXX	5822	8435	7000	7874	29131
	22XXX	4309	3182	4566	5331	17388
	26XXX	2705	3149	5433	4621	15908
	29XXX	929	1547	1915	1985	6376
	ENTIRE A/C	34968	43341	48807	56268	183384
MMH/FH	14XXX	0.56	0.43	0.43	0.42	0.45
	15XXX	1.53	1.34	0.87	0.94	1.10
	22XXX	1.13	0.51	0.57	0.64	0.66
	26XXX	0.71	0.50	0.67	0.55	0.60
	29XXX	0.24	0.25	0.24	0.24	0.24
	ENTIRE A/C	9.18	6.91	6.05	6.73	6.92
MMH/MA	14XXX	3.44	3.64	4.70	4.52	4.11
	15XXX	3.60	4.23	4.37	4.82	4.26
	22XXX	8.55	5.51	6.91	7.58	7.11
	26XXX	4.87	5.42	6.95	5.86	5.88
	29XXX	2.20	2.69	3.22	3.44	2.94
	ENTIRE A/C	3.30	3.36	3.83	4.39	3.74

CH-46D FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2925.	4659.	3667.	3857.	15108.
AVG.#OF AC		22.70	35.80	35.50	30.00	31.00
NO OF FLTS		2697.	3501.	3365.	3258.	12821.
MA'S	14XXX	418	544	431	465	1858
	15XXX	1123	1114	739	951	3927
	22XXX	145	225	264	365	999
	26XXX	264	306	301	318	1189
	29XXX	292	232	250	307	1081
	ENTIRE A/C	5497	6717	5737	6823	24774
MFHRMA	14XXX	7.00	8.56	8.51	8.29	8.13
	15XXX	2.60	4.18	4.96	4.06	3.85
	22XXX	20.17	20.71	13.89	10.57	15.12
	26XXX	11.08	15.23	12.18	12.13	12.71
	29XXX	10.02	20.08	14.67	12.56	13.98
	ENTIRE A/C	0.53	0.69	0.64	0.57	0.61
FAILURES	14XXX	245	312	206	233	996
	15XXX	449	536	361	515	1861
	22XXX	80	112	104	161	457
	26XXX	154	166	142	167	629
	29XXX	154	95	130	150	529
	ENTIRE A/C	2934	3640	3076	3700	13350
MFHRF	14XXX	11.94	14.93	17.80	16.55	15.17
	15XXX	6.51	8.69	10.16	7.49	8.12
	22XXX	36.56	41.60	35.26	23.96	33.06
	26XXX	18.99	28.07	25.82	23.10	24.02
	29XXX	18.99	49.04	28.21	25.71	28.56
	ENTIRE A/C	1.00	1.28	1.19	1.04	1.13
MMH	14XXX	1927	2168	1887	2621	8603
	15XXX	5981	4426	4280	5147	19834
	22XXX	1564	2050	2881	3285	9780
	26XXX	2177	2226	2356	2777	9536
	29XXX	1139	658	928	1055	3780
	ENTIRE A/C	25897	28920	30039	30571	115427
MMH/FH	14XXX	0.66	0.47	0.51	0.68	0.57
	15XXX	2.04	0.95	1.17	1.33	1.31
	22XXX	0.53	0.44	0.79	0.85	0.65
	26XXX	0.74	0.48	0.64	0.72	0.63
	29XXX	0.39	0.14	0.25	0.27	0.25
	ENTIRE A/C	8.85	6.21	8.19	7.93	7.64
MMH/MA	14XXX	4.61	3.99	4.38	5.64	4.63
	15XXX	5.33	3.97	5.79	5.41	5.05
	22XXX	10.79	9.11	10.91	9.00	9.79
	26XXX	8.25	7.27	7.83	8.73	8.02
	29XXX	3.90	2.84	3.71	3.44	3.50
	ENTIRE A/C	4.71	4.31	5.24	4.48	4.66

	WUC	1/74 THRU 6/74	UH-1N 1/74 THRU 12/74	FMFPAC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		0.	0.	40.	827.	867.
AVG.#OF AC		0.0	0.0	4.20	7.20	5.70
NO OF FLTS		0.	0.	194.	713.	907.
MA'S	14XXX	0	0	4	55	59
	15XXX	0	0	0	144	144
	22XXX	0	0	3	56	59
	26XXX	0	0	1	38	39
	29XXX	0	0	1	65	66
	ENTIRE A/C	0	0	32	938	970
MFHBMA	14XXX	0.0	0.0	10.00	15.04	14.69
	15XXX	0.0	0.0	0.0	5.74	6.02
	22XXX	0.0	0.0	13.33	14.77	14.69
	26XXX	0.0	0.0	40.00	21.76	22.23
	29XXX	0.0	0.0	40.00	12.72	13.14
	ENTIRE A/C	0.0	0.0	1.25	0.88	0.89
FAILURES	14XXX	0	0	3	27	30
	15XXX	0	0	0	49	49
	22XXX	0	0	2	32	34
	26XXX	0	0	0	18	18
	29XXX	0	0	1	50	51
	ENTIRE A/C	0	0	20	426	446
MFHBF	14XXX	0.0	0.0	13.33	30.63	28.90
	15XXX	0.0	0.0	0.0	16.88	17.69
	22XXX	0.0	0.0	20.00	25.84	25.50
	26XXX	0.0	0.0	0.0	45.94	48.17
	29XXX	0.0	0.0	40.00	16.54	17.00
	ENTIRE A/C	0.0	0.0	2.00	1.94	1.94
MMH	14XXX	0	0	7	186	193
	15XXX	0	0	0	368	368
	22XXX	0	0	6	230	236
	26XXX	0	0	4	47	51
	29XXX	0	0	4	71	75
	ENTIRE A/C	0	0	49	2853	2902
MMH/FH	14XXX	0.0	0.0	0.17	0.22	0.22
	15XXX	0.0	0.0	0.0	0.44	0.42
	22XXX	0.0	0.0	0.15	0.28	0.27
	26XXX	0.0	0.0	0.10	0.06	0.06
	29XXX	0.0	0.0	0.10	0.09	0.09
	ENTIRE A/C	0.0	0.0	1.22	3.45	3.35
MMH/MA	14XXX	0.0	0.0	1.75	3.38	3.27
	15XXX	0.0	0.0	0.0	2.56	2.56
	22XXX	0.0	0.0	2.00	4.11	4.00
	26XXX	0.0	0.0	4.00	1.24	1.31
	29XXX	0.0	0.0	4.00	1.09	1.14
	ENTIRE A/C	0.0	0.0	1.53	3.04	2.99

AH-1J FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2299.	2608.	3881.	3752.	12540.
AVG.#OF AC		16.10	21.20	28.60	30.90	24.20
NO OF FLTS		1594.	1870.	2574.	2651.	8689.
MA'S	14XXX	259	376	438	608	1681
	15XXX	308	365	621	745	2039
	22XXX	378	548	776	1168	2870
	26XXX	220	286	426	730	1662
	29XXX	342	380	544	1084	2350
	ENTIRE A/C	3623	4692	6375	9658	24348
MFHBMA	14XXX	8.88	6.94	8.86	6.17	7.46
	15XXX	7.46	7.15	6.25	5.04	6.15
	22XXX	6.08	4.76	5.00	3.21	4.37
	26XXX	10.45	9.12	9.11	5.14	7.55
	29XXX	6.72	6.86	7.13	3.46	5.34
	ENTIRE A/C	0.63	0.56	0.61	0.39	0.52
FAILURES	14XXX	144	227	238	317	926
	15XXX	166	186	246	321	919
	22XXX	244	323	344	553	1464
	26XXX	131	165	199	339	834
	29XXX	227	214	295	583	1319
	ENTIRE A/C	2066	2471	3034	4668	12239
MFHBF	14XXX	15.97	11.49	16.31	11.84	13.54
	15XXX	13.85	14.02	15.78	11.69	13.65
	22XXX	9.42	8.07	11.28	6.78	8.57
	26XXX	17.55	15.81	19.50	11.07	15.04
	29XXX	10.13	12.19	13.16	6.44	9.51
	ENTIRE A/C	1.11	1.06	1.28	0.80	1.02
MMH	14XXX	879	1614	2671	2348	7512
	15XXX	1155	1428	2799	2156	7538
	22XXX	2885	2639	5167	5951	16642
	26XXX	1022	1069	1798	2364	6253
	29XXX	1106	878	1477	2806	6267
	ENTIRE A/C	14051	17834	26942	31562	90389
MMH/FH	14XXX	0.38	0.62	0.69	0.63	0.60
	15XXX	0.50	0.55	0.72	0.57	0.60
	22XXX	1.25	1.01	1.33	1.59	1.33
	26XXX	0.44	0.41	0.46	0.63	0.50
	29XXX	0.48	0.34	0.38	0.75	0.50
	ENTIRE A/C	6.11	6.84	6.94	8.41	7.21
MMH/MA	14XXX	3.39	4.29	6.10	3.86	4.47
	15XXX	3.75	3.91	4.51	2.89	3.70
	22XXX	7.63	4.82	6.66	5.10	5.80
	26XXX	4.65	3.74	4.22	3.24	3.76
	29XXX	3.23	2.31	2.72	2.59	2.67
	ENTIRE A/C	3.88	3.80	4.23	3.27	3.71

UH-1E FMFPAC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		6559.	5404.	4656.	4475.	21094.
AVG.#OF AC		39.60	39.40	45.00	42.10	41.52
NO OF FLTS		4966.	4421.	4239.	3991.	17617.
MA'S	14XXX	653	673	553	451	2330
	15XXX	714	1129	948	721	3512
	22XXX	299	388	312	269	1268
	26XXX	477	454	363	355	1649
	29XXX	390	439	391	263	1483
	ENTIRE A/C	5889	6232	5441	4554	22116
MFHRMA	14XXX	10.04	8.03	8.42	9.92	9.05
	15XXX	9.19	4.79	4.91	6.21	6.01
	22XXX	21.94	13.93	14.92	16.64	16.64
	26XXX	13.75	11.90	12.83	12.61	12.79
	29XXX	16.82	12.31	11.91	17.02	14.22
	ENTIRE A/C	1.11	0.87	0.86	0.98	0.95
FAILURES	14XXX	428	407	324	268	1427
	15XXX	388	592	426	333	1739
	22XXX	225	262	184	169	840
	26XXX	308	274	232	214	1028
	29XXX	306	322	271	166	1065
	ENTIRE A/C	3551	3628	2979	2468	12626
MFHBF	14XXX	15.32	13.28	14.37	16.70	14.78
	15XXX	16.90	9.13	10.93	13.44	12.13
	22XXX	29.15	20.63	25.30	26.48	25.11
	26XXX	21.30	19.72	20.07	20.91	20.52
	29XXX	21.43	16.78	17.18	26.96	19.81
	ENTIRE A/C	1.85	1.49	1.56	1.81	1.67
MMH	14XXX	2315	3075	2026	1707	9123
	15XXX	3141	5229	4593	2913	15876
	22XXX	1590	2690	1150	1501	6931
	26XXX	2239	2411	1683	1649	7982
	29XXX	1054	1085	1093	641	3873
	ENTIRE A/C	26711	29435	23196	19614	98956
MMH/FH	14XXX	0.35	0.57	0.44	0.38	0.43
	15XXX	0.48	0.97	0.99	0.65	0.75
	22XXX	0.24	0.50	0.25	0.34	0.33
	26XXX	0.34	0.45	0.36	0.37	0.38
	29XXX	0.16	0.20	0.23	0.14	0.18
	ENTIRE A/C	4.07	5.45	4.98	4.38	4.69
MMH/MA	14XXX	3.55	4.57	3.66	3.78	3.92
	15XXX	4.40	4.63	4.84	4.04	4.52
	22XXX	5.32	6.93	3.69	5.58	5.47
	26XXX	4.69	5.31	4.64	4.65	4.84
	29XXX	2.70	2.47	2.80	2.44	2.61
	ENTIRE A/C	4.54	4.72	4.26	4.31	4.47

CH-53D MARNFMF

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		671.	680.	496.	549.	2396.
AVG.#OF AC		4.00	4.00	4.80	5.00	4.45
NO OF FLTS		377.	410.	305.	330.	1422.
MA'S	14XXX	63	53	107	39	262
	15XXX	137	137	143	152	569
	22XXX	15	23	12	13	63
	26XXX	85	67	103	100	355
	29XXX	55	45	87	70	257
	ENTIRE A/C	760	860	1275	966	3861
MFHBMA	14XXX	10.65	12.83	4.64	14.08	9.15
	15XXX	4.90	4.96	3.47	3.61	4.21
	22XXX	44.73	29.57	41.33	42.23	38.03
	26XXX	7.89	10.15	4.82	5.49	6.75
	29XXX	12.20	15.11	5.70	7.84	9.32
	ENTIRE A/C	0.88	0.79	0.39	0.57	0.62
FAILURES	14XXX	40	39	64	22	165
	15XXX	86	99	97	88	370
	22XXX	8	15	7	11	41
	26XXX	51	52	61	66	230
	29XXX	35	31	57	37	160
	ENTIRE A/C	514	600	798	607	2519
MFHBF	14XXX	16.77	17.44	7.75	24.95	14.52
	15XXX	7.80	6.87	5.11	6.24	6.48
	22XXX	83.88	45.33	70.86	49.91	58.44
	26XXX	13.16	13.08	8.13	8.32	10.42
	29XXX	19.17	21.94	8.70	14.84	14.97
	ENTIRE A/C	1.31	1.13	0.62	0.90	0.95
MMH	14XXX	375	725	537	141	1778
	15XXX	611	653	793	845	2902
	22XXX	111	172	132	55	470
	26XXX	574	261	282	480	1597
	29XXX	205	159	269	201	834
	ENTIRE A/C	3398	3682	4368	4673	16121
MMH/FH	14XXX	0.56	1.07	1.08	0.26	0.74
	15XXX	0.91	0.96	1.60	1.54	1.21
	22XXX	0.17	0.25	0.27	0.10	0.20
	26XXX	0.86	0.38	0.57	0.87	0.67
	29XXX	0.31	0.23	0.54	0.37	0.35
	ENTIRE A/C	5.06	5.41	8.81	8.51	6.73
MMH/MA	14XXX	5.95	13.68	5.02	3.62	6.79
	15XXX	4.46	4.77	5.55	5.56	5.10
	22XXX	7.40	7.48	11.00	4.23	7.46
	26XXX	6.75	3.90	2.74	4.80	4.50
	29XXX	3.73	3.53	3.09	2.87	3.25
	ENTIRE A/C	4.47	4.28	3.43	4.84	4.18

CH-46F MARNFMF

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		802.	840.	854.	740.	3236.
AVG.#OF AC		5.90	5.50	5.60	5.60	5.65
NO OF FLTS		641.	660.	726.	591.	2618.
MA'S	14XXX	58	84	72	64	278
	15XXX	156	129	126	114	525
	22XXX	40	35	79	65	219
	26XXX	44	59	63	86	252
	29XXX	52	67	65	82	266
	ENTIRE A/C	988	1007	1079	1071	4145
MFHBMA	14XXX	13.83	10.00	11.86	11.56	11.64
	15XXX	5.14	6.51	6.78	6.49	6.16
	22XXX	20.05	24.00	10.81	11.38	14.78
	26XXX	18.23	14.24	13.56	8.60	12.84
	29XXX	15.42	12.54	13.14	9.02	12.17
	ENTIRE A/C	0.81	0.83	0.79	0.69	0.78
FAILURES	14XXX	42	51	37	27	157
	15XXX	79	85	88	78	330
	22XXX	11	17	40	27	95
	26XXX	24	37	36	49	146
	29XXX	41	47	46	48	182
	ENTIRE A/C	645	656	664	642	2607
MFHBF	14XXX	19.10	16.47	23.08	27.41	20.61
	15XXX	10.15	9.88	9.70	9.49	9.81
	22XXX	72.91	49.41	21.35	27.41	34.06
	26XXX	33.42	22.70	23.72	15.10	22.16
	29XXX	19.56	17.87	18.57	15.42	17.78
	ENTIRE A/C	1.24	1.28	1.29	1.15	1.24
MMH	14XXX	290	328	366	308	1292
	15XXX	594	285	425	696	2000
	22XXX	486	237	598	468	1789
	26XXX	313	218	298	435	1264
	29XXX	96	138	152	257	643
	ENTIRE A/C	4260	3148	4545	5296	17249
MMH/FH	14XXX	0.36	0.39	0.43	0.42	0.40
	15XXX	0.74	0.34	0.50	0.94	0.62
	22XXX	0.61	0.28	0.70	0.63	0.55
	26XXX	0.39	0.26	0.35	0.59	0.39
	29XXX	0.12	0.16	0.18	0.35	0.20
	ENTIRE A/C	5.31	3.75	5.32	7.16	5.33
MMH/MA	14XXX	5.00	3.90	5.08	4.81	4.65
	15XXX	3.81	2.21	3.37	6.11	3.81
	22XXX	12.15	6.77	7.57	7.20	8.17
	26XXX	7.11	3.69	4.73	5.06	5.02
	29XXX	1.85	2.06	2.34	3.13	2.42
	ENTIRE A/C	4.31	3.13	4.21	4.94	4.16

CH-46D MARNFMF

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		597.	578.	165.	23.	1363.
AVG.#OF AC		4.00	4.80	1.90	1.00	2.92
NO OF FLTS		586.	504.	284.	66.	1440.
MA'S	14XXX	86	55	19	6	166
	15XXX	188	196	18	5	407
	22XXX	48	41	13	3	105
	26XXX	61	72	14	0	147
	29XXX	49	46	9	4	108
	ENTIRE A/C	1185	1265	256	48	2754
MFHRMA	14XXX	6.94	10.51	8.68	3.83	8.21
	15XXX	3.18	2.95	9.17	4.60	3.35
	22XXX	12.44	14.10	12.69	7.67	12.98
	26XXX	9.79	8.03	11.79	0.0	9.27
	29XXX	12.18	12.57	18.33	5.75	12.62
	ENTIRE A/C	0.50	0.46	0.64	0.48	0.49
FAILURES	14XXX	40	21	5	2	68
	15XXX	80	64	8	3	155
	22XXX	24	16	4	1	45
	26XXX	25	34	7	0	66
	29XXX	33	25	5	1	64
	ENTIRE A/C	618	586	130	32	1366
MFHBF	14XXX	14.92	27.52	33.00	11.50	20.04
	15XXX	7.46	9.03	20.63	7.67	8.79
	22XXX	24.87	36.13	41.25	23.00	30.29
	26XXX	23.88	17.00	23.57	0.0	20.65
	29XXX	18.09	23.12	33.00	23.00	21.30
	ENTIRE A/C	0.97	0.99	1.27	0.72	1.00
MMH	14XXX	318	167	85	64	634
	15XXX	533	678	120	17	1348
	22XXX	450	417	148	1	1016
	26XXX	285	426	186	0	897
	29XXX	126	122	23	12	283
	ENTIRE A/C	4072	4418	1153	288	9931
MMH/FH	14XXX	0.53	0.29	0.52	2.78	0.47
	15XXX	0.89	1.17	0.73	0.74	0.99
	22XXX	0.75	0.72	0.90	0.04	0.75
	26XXX	0.48	0.74	1.13	0.0	0.66
	29XXX	0.21	0.21	0.14	0.52	0.21
	ENTIRE A/C	6.82	7.64	6.99	12.52	7.29
MMH/MA	14XXX	3.70	3.04	4.47	10.67	3.82
	15XXX	2.84	3.46	6.67	3.40	3.31
	22XXX	9.37	10.17	11.38	0.33	9.68
	26XXX	4.67	5.92	13.29	0.0	6.10
	29XXX	2.57	2.65	2.56	3.00	2.62
	ENTIRE A/C	3.44	3.49	4.50	6.00	3.61

SH-3G MARNFMF

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		153.	162.	350.	237.	902.
AVG.#OF AC		1.80	2.70	3.40	2.90	2.70
NO OF FLTS		94.	198.	231.	139.	662.
MA'S	14XXX	37	26	37	15	115
	15XXX	27	41	66	30	164
	22XXX	30	26	40	17	113
	26XXX	14	12	15	9	50
	29XXX	15	4	26	29	74
	ENTIRE A/C	376	349	617	339	1681
MFHBMA	14XXX	4.14	6.23	9.46	15.80	7.84
	15XXX	5.67	3.95	5.30	7.90	5.50
	22XXX	5.10	6.23	8.75	13.94	7.98
	26XXX	10.93	13.50	23.33	26.33	18.04
	29XXX	10.20	40.50	13.46	8.17	12.19
	ENTIRE A/C	0.41	0.46	0.57	0.70	0.54
FAILURES	14XXX	34	22	27	8	91
	15XXX	9	17	44	15	85
	22XXX	10	13	23	11	57
	26XXX	11	8	9	8	36
	29XXX	10	4	18	23	55
	ENTIRE A/C	252	217	403	205	1077
MFHBF	14XXX	4.50	7.36	12.96	29.63	9.91
	15XXX	17.00	9.53	7.95	15.80	10.61
	22XXX	15.30	12.46	15.22	21.55	15.82
	26XXX	13.91	20.25	38.69	29.63	25.06
	29XXX	15.30	40.50	19.44	10.30	16.40
	ENTIRE A/C	0.61	0.75	0.87	1.16	0.84
MMH	14XXX	108	37	133	31	309
	15XXX	111	262	234	288	895
	22XXX	176	274	332	183	965
	26XXX	29	31	20	39	119
	29XXX	42	1	64	154	261
	ENTIRE A/C	1675	1358	2741	2063	7837
MMH/FH	14XXX	0.71	0.23	0.38	0.13	0.34
	15XXX	0.73	1.62	0.67	1.22	0.99
	22XXX	1.15	1.69	0.95	0.77	1.07
	26XXX	0.19	0.19	0.06	0.16	0.13
	29XXX	0.27	0.01	0.18	0.65	0.29
	ENTIRE A/C	10.95	8.38	7.83	8.70	8.69
MMH/MA	14XXX	2.92	1.42	3.59	2.07	2.69
	15XXX	4.11	6.39	3.55	9.60	5.46
	22XXX	5.87	10.54	8.30	10.76	8.54
	26XXX	2.07	2.58	1.33	4.33	2.38
	29XXX	2.80	0.25	2.46	5.31	3.53
	ENTIRE A/C	4.45	3.89	4.44	6.09	4.66

UH-1N MARNFMF

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		431.	334.	360.	650.	1775.
AVG.#OF AC		2.70	2.10	2.70	5.60	3.27
NO OF FLTS		309.	256.	282.	571.	1418.
MA'S	14XXX	7	12	16	26	61
	15XXX	27	20	21	24	92
	22XXX	15	16	22	42	95
	26XXX	8	7	11	19	45
	29XXX	14	17	36	34	101
	ENTIRE A/C	219	241	262	348	1070
MFHRMA	14XXX	61.57	27.83	22.50	25.00	29.10
	15XXX	15.96	16.70	17.14	27.08	19.29
	22XXX	28.73	20.88	16.36	15.48	18.68
	26XXX	53.88	47.71	32.73	34.21	39.44
	29XXX	30.79	19.65	10.00	19.12	17.57
	ENTIRE A/C	1.97	1.39	1.37	1.87	1.66
FAILURES	14XXX	5	8	12	13	38
	15XXX	17	17	14	11	59
	22XXX	14	10	16	14	54
	26XXX	4	0	7	7	18
	29XXX	12	13	27	27	79
	ENTIRE A/C	148	155	166	194	663
MFHRF	14XXX	86.20	41.75	30.00	50.00	46.71
	15XXX	25.35	19.65	25.71	59.09	30.08
	22XXX	30.79	33.40	22.50	46.43	32.87
	26XXX	107.75	0.0	51.43	92.86	98.61
	29XXX	35.92	25.69	13.33	24.07	22.47
	ENTIRE A/C	2.91	2.15	360.00	3.35	3.56
MMH	14XXX	27	55	79	66	227
	15XXX	53	69	41	48	211
	22XXX	44	32	31	548	655
	26XXX	17	7	36	106	166
	29XXX	28	23	64	178	293
	ENTIRE A/C	904	691	983	1701	4279
MMH/FH	14XXX	0.06	0.16	0.22	0.10	0.13
	15XXX	0.12	0.21	0.11	0.07	0.12
	22XXX	0.10	0.10	0.09	0.84	0.37
	26XXX	0.04	0.02	0.10	0.16	0.09
	29XXX	0.06	0.07	0.18	0.27	0.17
	ENTIRE A/C	2.10	2.07	2.73	2.62	2.41
MMH/MA	14XXX	3.86	4.58	4.94	2.54	3.72
	15XXX	1.96	3.45	1.95	2.00	2.29
	22XXX	2.93	2.00	1.41	13.05	6.89
	26XXX	2.13	1.00	3.27	5.58	3.69
	29XXX	2.00	1.35	1.78	5.24	2.90
	ENTIRE A/C	4.13	2.87	3.75	4.89	4.00

CH-53A NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		86.	162.	81.	219.	548.
AVG.#OF AC		1.50	2.00	1.60	2.00	1.77
NO OF FLTS		115.	190.	121.	149.	575.
MA'S	14XXX	8	4	10	16	38
	15XXX	2	2	9	20	33
	22XXX	7	9	6	15	37
	26XXX	9	19	9	8	45
	29XXX	2	2	8	7	19
	ENTIRE A/C	69	67	69	163	368
MFHBMA	14XXX	10.75	40.50	8.10	13.69	14.42
	15XXX	43.00	81.00	9.00	10.95	16.61
	22XXX	12.29	18.00	13.50	14.60	14.81
	26XXX	9.56	8.53	9.00	27.38	12.18
	29XXX	43.00	81.00	10.13	31.29	28.84
	ENTIRE A/C	1.25	2.42	1.17	1.34	1.49
FAILURES	14XXX	6	1	5	10	22
	15XXX	2	1	3	12	18
	22XXX	5	5	2	7	19
	26XXX	7	13	7	5	32
	29XXX	1	2	5	7	15
	ENTIRE A/C	42	40	36	86	204
MFHBF	14XXX	14.33	162.00	16.20	21.90	24.91
	15XXX	43.00	162.00	27.00	18.25	30.44
	22XXX	17.20	32.40	40.50	31.29	28.84
	26XXX	12.29	12.46	11.57	43.80	17.13
	29XXX	86.00	81.00	16.20	31.29	36.53
	ENTIRE A/C	2.05	4.05	2.25	2.55	2.69
MMH	14XXX	18	6	34	25	83
	15XXX	10	6	274	98	388
	22XXX	14	13	57	79	163
	26XXX	13	34	20	27	94
	29XXX	1	4	39	11	55
	ENTIRE A/C	165	200	581	423	1369
MMH/FH	14XXX	0.21	0.04	0.42	0.11	0.15
	15XXX	0.12	0.04	3.38	0.45	0.71
	22XXX	0.16	0.08	0.70	0.36	0.30
	26XXX	0.15	0.21	0.25	0.12	0.17
	29XXX	0.01	0.02	0.48	0.05	0.10
	ENTIRE A/C	1.92	1.23	7.17	1.93	2.50
MMH/MA	14XXX	2.25	1.50	3.40	1.56	2.18
	15XXX	5.00	3.00	30.44	4.90	11.76
	22XXX	2.00	1.44	9.50	5.27	4.41
	26XXX	1.44	1.79	2.22	3.38	2.09
	29XXX	0.50	2.00	4.88	1.57	2.89
	ENTIRE A/C	2.39	2.99	8.42	2.60	3.72

	WUC	1/74 THRU 6/74	CH-53D 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		21.	6.	6.	3.	36.
AVG.#OF AC		0.80	1.00	1.00	1.00	0.95
NO OF FLTS		13.	24.	24.	24.	85.
MA'S	14XXX	4	0	12	1	17
	15XXX	9	1	14	1	25
	22XXX	1	0	0	0	1
	26XXX	4	0	2	2	8
	29XXX	1	0	0	1	2
	ENTIRE A/C	78	1	30	24	133
MFHBMA	14XXX	5.25	0.0	0.50	3.00	2.12
	15XXX	2.33	6.00	0.43	3.00	1.44
	22XXX	21.00	0.0	0.0	0.0	36.00
	26XXX	5.25	0.0	3.00	1.50	4.50
	29XXX	21.00	0.0	0.0	3.00	18.00
	ENTIRE A/C	0.27	6.00	0.20	0.12	0.27
FAILURES	14XXX	3	0	9	0	12
	15XXX	5	1	7	0	13
	22XXX	0	0	0	0	0
	26XXX	2	0	1	1	4
	29XXX	0	0	0	1	1
	ENTIRE A/C	36	1	17	10	64
MFHBF	14XXX	7.00	0.0	0.67	0.0	3.00
	15XXX	4.20	6.00	0.86	0.0	2.77
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	10.50	0.0	6.00	3.00	9.00
	29XXX	0.0	0.0	0.0	3.00	36.00
	ENTIRE A/C	0.58	6.00	0.35	0.30	0.56
MMH	14XXX	9	0	29	0	38
	15XXX	100	10	68	1	179
	22XXX	2	0	0	0	2
	26XXX	24	0	4	5	33
	29XXX	2	0	0	2	4
	ENTIRE A/C	222	10	108	69	409
MMH/FH	14XXX	0.43	0.0	4.83	0.0	1.06
	15XXX	4.76	1.67	11.33	0.33	4.97
	22XXX	0.10	0.0	0.0	0.0	0.06
	26XXX	1.14	0.0	0.67	1.67	0.92
	29XXX	0.10	0.0	0.0	0.67	0.11
	ENTIRE A/C	10.57	1.67	18.00	23.00	11.36
MMH/MA	14XXX	2.25	0.0	2.42	0.0	2.24
	15XXX	11.11	10.00	4.86	1.00	7.16
	22XXX	2.00	0.0	0.0	0.0	2.00
	26XXX	6.00	0.0	2.00	2.50	4.13
	29XXX	2.00	0.0	0.0	2.00	2.00
	ENTIRE A/C	2.85	10.00	3.60	2.87	3.08

CH-46F NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		43.	0.	0.	0.	43.
AVG.#OF AC		0.50	0.0	0.0	0.0	0.50
NO OF FLTS		58.	0.	0.	0.	58.
MA'S	14XXX	1	0	0	0	1
	15XXX	5	0	0	0	5
	22XXX	1	0	0	0	1
	26XXX	2	0	0	0	2
	29XXX	3	0	0	0	3
	ENTIRE A/C	26	0	0	0	26
MFHBMA	14XXX	43.00	0.0	0.0	0.0	43.00
	15XXX	8.60	0.0	0.0	0.0	8.60
	22XXX	43.00	0.0	0.0	0.0	43.00
	26XXX	21.50	0.0	0.0	0.0	21.50
	29XXX	14.33	0.0	0.0	0.0	14.33
	ENTIRE A/C	1.65	0.0	0.0	0.0	1.65
FAILURES	14XXX	1	0	0	0	1
	15XXX	5	0	0	0	5
	22XXX	1	0	0	0	1
	26XXX	2	0	0	0	2
	29XXX	0	0	0	0	0
	ENTIRE A/C	22	0	0	0	22
MFHBF	14XXX	43.00	0.0	0.0	0.0	43.00
	15XXX	8.60	0.0	0.0	0.0	8.60
	22XXX	43.00	0.0	0.0	0.0	43.00
	26XXX	21.50	0.0	0.0	0.0	21.50
	29XXX	0.0	0.0	0.0	0.0	0.0
	ENTIRE A/C	1.95	0.0	0.0	0.0	1.95
MMH	14XXX	19	0	0	0	19
	15XXX	10	0	0	0	10
	22XXX	0	0	0	0	0
	26XXX	7	0	0	0	7
	29XXX	13	0	0	0	13
	ENTIRE A/C	71	0	0	0	71
MMH/FH	14XXX	0.44	0.0	0.0	0.0	0.44
	15XXX	0.23	0.0	0.0	0.0	0.23
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	0.16	0.0	0.0	0.0	0.16
	29XXX	0.30	0.0	0.0	0.0	0.30
	ENTIRE A/C	1.65	0.0	0.0	0.0	1.65
MMH/MA	14XXX	19.00	0.0	0.0	0.0	19.00
	15XXX	2.00	0.0	0.0	0.0	2.00
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	3.50	0.0	0.0	0.0	3.50
	29XXX	4.33	0.0	0.0	0.0	4.33
	ENTIRE A/C	2.73	0.0	0.0	0.0	2.73

CH-46D NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		79.	172.	309.	253.	813.
AVG.#OF AC		2.00	2.90	2.20	2.30	2.35
NO OF FLTS		47.	103.	256.	195.	601.
MA'S	14XXX	17	34	52	34	137
	15XXX	23	89	68	90	275
	22XXX	13	27	31	15	86
	26XXX	9	24	19	29	81
	29XXX	9	33	19	13	74
	ENTIRE A/C	177	445	480	532	1634
MFHBMA	14XXX	4.65	5.06	5.94	7.44	5.93
	15XXX	2.82	1.93	4.54	2.81	2.96
	22XXX	6.08	6.37	9.97	16.87	9.45
	26XXX	8.78	7.17	16.26	8.72	10.04
	29XXX	8.78	5.21	16.26	19.46	10.99
	ENTIRE A/C	0.45	0.39	0.64	0.48	0.50
FAILURES	14XXX	13	17	30	15	75
	15XXX	14	38	45	58	155
	22XXX	6	15	14	11	46
	26XXX	4	10	10	18	42
	29XXX	8	16	11	9	46
	ENTIRE A/C	100	219	292	304	915
MFHBF	14XXX	6.08	10.12	10.30	16.87	10.84
	15XXX	5.64	4.53	6.87	4.36	5.25
	22XXX	13.17	11.47	22.07	23.00	17.67
	26XXX	19.75	17.20	30.90	14.06	19.36
	29XXX	9.88	9.56	28.09	28.11	17.67
	ENTIRE A/C	0.79	0.79	1.06	0.83	0.89
MMH	14XXX	1037	100	138	111	1386
	15XXX	177	265	189	567	1198
	22XXX	76	159	47	86	368
	26XXX	59	49	54	218	380
	29XXX	40	195	62	34	331
	ENTIRE A/C	1917	1457	1444	2322	7140
MMH/FH	14XXX	13.13	0.58	0.45	0.44	1.70
	15XXX	2.24	1.54	0.61	2.24	1.47
	22XXX	0.96	0.92	0.15	0.34	0.45
	26XXX	0.75	0.28	0.17	0.86	0.47
	29XXX	0.51	1.13	0.20	0.13	0.41
	ENTIRE A/C	24.27	8.47	4.67	9.18	8.78
MMH/MA	14XXX	61.00	2.94	2.65	3.26	10.12
	15XXX	6.32	2.98	2.78	6.30	4.36
	22XXX	5.85	5.89	1.52	5.73	4.28
	26XXX	6.56	2.04	2.84	7.52	4.69
	29XXX	4.44	5.91	3.26	2.62	4.47
	ENTIRE A/C	10.83	3.27	3.01	4.36	4.37

	WUC	1/74 THRU 6/74	SH-3H 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2.	87.	47.	35.	171.
AVG.#OF AC		0.20	1.00	1.40	1.00	0.90
NO OF FLTS		7.	45.	42.	18.	112.
MA'S	14XXX	0	0	3	2	5
	15XXX	2	13	13	8	36
	22XXX	0	7	51	6	64
	26XXX	0	11	3	3	17
	29XXX	1	1	31	5	38
	ENTIRE A/C	16	124	217	114	471
MFHBMA	14XXX	0.0	0.0	15.67	17.50	34.20
	15XXX	1.00	6.69	3.62	4.38	4.75
	22XXX	0.0	12.43	0.92	5.83	2.67
	26XXX	0.0	7.91	15.67	11.67	10.06
	29XXX	2.00	87.00	1.52	7.00	4.50
	ENTIRE A/C	0.13	0.70	0.22	0.31	0.36
FAILURES	14XXX	0	0	3	1	4
	15XXX	2	11	5	3	21
	22XXX	0	5	21	4	30
	26XXX	0	8	1	2	11
	29XXX	0	0	14	3	17
	ENTIRE A/C	10	76	100	60	246
MFHBF	14XXX	0.0	0.0	15.67	35.00	42.75
	15XXX	1.00	7.91	9.40	11.67	8.14
	22XXX	0.0	17.40	2.24	8.75	5.70
	26XXX	0.0	10.88	47.00	17.50	15.55
	29XXX	0.0	0.0	3.36	11.67	10.06
	ENTIRE A/C	0.20	1.14	0.47	0.58	0.70
MMH	14XXX	0	0	2	50	52
	15XXX	3	37	42	9	91
	22XXX	0	15	189	11	215
	26XXX	0	17	2	4	23
	29XXX	1	0	34	7	42
	ENTIRE A/C	15	311	532	356	1214
MMH/FH	14XXX	0.0	0.0	0.04	1.43	0.30
	15XXX	1.50	0.43	0.89	0.26	0.53
	22XXX	0.0	0.17	4.02	0.31	1.26
	26XXX	0.0	0.20	0.04	0.11	0.13
	29XXX	0.50	0.0	0.72	0.20	0.25
	ENTIRE A/C	7.50	3.57	11.32	10.17	7.10
MMH/MA	14XXX	0.0	0.0	0.67	25.00	10.40
	15XXX	1.50	2.85	3.23	1.13	2.53
	22XXX	0.0	2.14	3.71	1.83	3.36
	26XXX	0.0	1.55	0.67	1.33	1.35
	29XXX	1.00	0.0	1.10	1.40	1.11
	ENTIRE A/C	0.94	2.51	2.45	3.12	2.58

SH-3G NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		232.	269.	255.	120.	876.
AVG.#OF AC		3.00	3.80	2.50	2.70	3.00
NO OF FLTS		128.	182.	177.	84.	571.
MA'S	14XXX	31	28	19	16	94
	15XXX	86	75	55	42	258
	22XXX	39	36	26	35	136
	26XXX	43	29	32	23	127
	29XXX	28	32	39	24	123
	ENTIRE A/C	671	587	464	440	2162
MFHBMA	14XXX	7.48	9.61	13.42	7.50	9.32
	15XXX	2.70	3.59	4.64	2.86	3.40
	22XXX	5.95	7.47	9.81	3.43	6.44
	26XXX	5.40	9.28	7.97	5.22	6.90
	29XXX	8.29	8.41	6.54	5.00	7.12
	ENTIRE A/C	0.35	0.46	0.55	0.27	0.41
FAILURES	14XXX	23	16	16	8	63
	15XXX	57	35	23	22	137
	22XXX	28	21	10	19	78
	26XXX	27	23	25	18	93
	29XXX	21	22	14	15	72
	ENTIRE A/C	426	316	216	239	1197
MFHBF	14XXX	10.09	16.81	15.94	15.00	13.90
	15XXX	4.07	7.69	11.09	5.45	6.39
	22XXX	8.29	12.81	25.50	6.32	11.23
	26XXX	8.59	11.70	10.20	6.67	9.42
	29XXX	11.05	12.23	18.21	8.00	12.17
	ENTIRE A/C	0.54	0.85	1.18	0.50	0.73
MMH	14XXX	83	85	37	38	243
	15XXX	331	574	201	157	1263
	22XXX	172	77	216	182	647
	26XXX	87	85	68	68	308
	29XXX	29	50	144	194	417
	ENTIRE A/C	1981	2101	1490	1681	7253
MMH/FH	14XXX	0.36	0.32	0.15	0.32	0.28
	15XXX	1.43	2.13	0.79	1.31	1.44
	22XXX	0.74	0.29	0.85	1.52	0.74
	26XXX	0.37	0.32	0.27	0.57	0.35
	29XXX	0.12	0.19	0.56	1.62	0.48
	ENTIRE A/C	8.54	7.81	5.84	14.01	8.28
MMH/MA	14XXX	2.68	3.04	1.95	2.38	2.59
	15XXX	3.85	7.65	3.65	3.74	4.90
	22XXX	4.41	2.14	8.31	5.20	4.76
	26XXX	2.02	2.93	2.13	2.96	2.43
	29XXX	1.04	1.56	3.69	8.08	3.39
	ENTIRE A/C	2.95	3.58	3.21	3.82	3.35

	WUC	1/74 THRU 6/74	SH-3D 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		8.	53.	41.	99.	201.
AVG.#OF AC		1.10	1.00	1.00	1.00	1.02
NO OF FLTS		3.	29.	56.	55.	143.
MA'S	14XXX	2	2	1	2	7
	15XXX	12	32	10	22	76
	22XXX	12	8	15	20	55
	26XXX	11	14	3	14	42
	29XXX	4	5	8	14	31
	ENTIRE A/C	131	143	87	223	584
MFHBMA	14XXX	4.00	26.50	41.00	49.50	28.71
	15XXX	0.67	1.66	4.10	4.50	2.64
	22XXX	0.67	6.63	2.73	4.95	3.65
	26XXX	0.73	3.79	13.67	7.07	4.79
	29XXX	2.00	10.60	5.13	7.07	6.48
	ENTIRE A/C	0.06	0.37	0.47	0.44	0.34
FAILURES	14XXX	0	2	1	2	5
	15XXX	5	17	8	11	41
	22XXX	8	5	5	11	29
	26XXX	6	5	1	12	24
	29XXX	3	4	2	6	15
	ENTIRE A/C	77	77	44	124	322
MFHBF	14XXX	0.0	26.50	41.00	49.50	40.20
	15XXX	1.60	3.12	5.13	9.00	4.90
	22XXX	1.00	10.60	8.20	9.00	6.93
	26XXX	1.33	10.60	41.00	8.25	8.37
	29XXX	2.67	13.25	20.50	16.50	13.40
	ENTIRE A/C	0.10	0.69	0.93	0.80	0.62
MMH	14XXX	2	1	1	6	10
	15XXX	23	107	54	61	245
	22XXX	22	14	350	126	512
	26XXX	9	207	2	27	245
	29XXX	13	23	12	70	118
	ENTIRE A/C	289	524	577	741	2131
MMH/FH	14XXX	0.25	0.02	0.02	0.06	0.05
	15XXX	2.88	2.02	1.32	0.62	1.22
	22XXX	2.75	0.26	8.54	1.27	2.55
	26XXX	1.13	3.91	0.05	0.27	1.22
	29XXX	1.63	0.43	0.29	0.71	0.59
	ENTIRE A/C	36.13	9.89	14.07	7.48	10.60
MMH/MA	14XXX	1.00	0.50	1.00	3.00	1.43
	15XXX	1.92	3.34	5.40	2.77	3.22
	22XXX	1.83	1.75	23.33	6.30	9.31
	26XXX	0.82	14.79	0.67	1.93	5.83
	29XXX	3.25	4.60	1.50	5.00	3.81
	ENTIRE A/C	2.21	3.66	6.63	3.32	3.65

	WUC	1/74 THRU 6/74	SH-3A 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		74.	11.	128.	129.	342.
AVG.#OF AC		1.00	1.00	1.00	0.80	0.95
NO OF FLTS		88.	34.	72.	60.	254.
MA'S	14XXX	1	0	4	9	14
	15XXX	7	4	14	6	31
	22XXX	16	6	7	0	29
	26XXX	9	3	4	2	18
	29XXX	4	0	1	1	6
	ENTIRE A/C	88	36	89	53	266
MFHRMA	14XXX	74.00	0.0	32.00	14.33	24.43
	15XXX	10.57	2.75	9.14	21.50	11.03
	22XXX	4.63	1.83	18.29	0.0	11.79
	26XXX	8.22	3.67	32.00	64.50	19.00
	29XXX	18.50	0.0	128.00	129.00	57.00
	ENTIRE A/C	0.84	0.31	1.44	2.43	1.29
FAILURES	14XXX	1	0	3	8	12
	15XXX	5	3	7	6	21
	22XXX	14	6	5	0	25
	26XXX	8	3	4	2	17
	29XXX	1	0	0	1	2
	ENTIRE A/C	58	19	53	33	163
MFHBF	14XXX	74.00	0.0	42.67	16.13	28.50
	15XXX	14.80	3.67	18.29	21.50	16.29
	22XXX	5.29	1.83	25.60	0.0	13.68
	26XXX	9.25	3.67	32.00	64.50	20.12
	29XXX	74.00	0.0	0.0	129.00	171.00
	ENTIRE A/C	1.28	0.58	2.42	3.91	2.10
MMH	14XXX	1	0	8	16	25
	15XXX	14	8	75	8	105
	22XXX	121	15	17	0	153
	26XXX	56	10	4	8	78
	29XXX	4	0	3	2	9
	ENTIRE A/C	323	66	261	164	814
MMH/FH	14XXX	0.01	0.0	0.06	0.12	0.07
	15XXX	0.19	0.73	0.59	0.06	0.31
	22XXX	1.64	1.36	0.13	0.0	0.45
	26XXX	0.76	0.91	0.03	0.06	0.23
	29XXX	0.05	0.0	0.02	0.02	0.03
	ENTIRE A/C	4.36	6.00	2.04	1.27	2.38
MMH/MA	14XXX	1.00	0.0	2.00	1.78	1.79
	15XXX	2.00	2.00	5.36	1.33	3.39
	22XXX	7.56	2.50	2.43	0.0	5.28
	26XXX	6.22	3.33	1.00	4.00	4.33
	29XXX	1.00	0.0	3.00	2.00	1.50
	ENTIRE A/C	3.67	1.83	2.93	3.09	3.06

	WUC	1/74 THRU 6/74	SH-2F 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		36.	0.	86.	63.	185.
AVG.#OF AC		0.80	0.0	0.80	1.00	0.87
NO OF FLTS		69.	0.	57.	37.	163.
MA'S	14XXX	0	0	6	6	12
	15XXX	3	0	12	6	21
	22XXX	0	0	13	9	22
	26XXX	1	0	6	10	17
	29XXX	4	0	3	3	10
	ENTIRE A/C	17	0	105	139	261
MFHBMA	14XXX	0.0	0.0	14.33	10.50	15.42
	15XXX	12.00	0.0	7.17	10.50	8.81
	22XXX	0.0	0.0	6.62	7.00	8.41
	26XXX	36.00	0.0	14.33	6.30	10.88
	29XXX	9.00	0.0	28.67	21.00	18.50
	ENTIRE A/C	2.12	0.0	0.82	0.45	0.71
FAILURES	14XXX	0	0	4	2	6
	15XXX	1	0	8	4	13
	22XXX	0	0	8	6	14
	26XXX	1	0	5	6	12
	29XXX	0	0	2	3	5
	ENTIRE A/C	9	0	62	65	136
MFHBF	14XXX	0.0	0.0	21.50	31.50	30.83
	15XXX	36.00	0.0	10.75	15.75	14.23
	22XXX	0.0	0.0	10.75	10.50	13.21
	26XXX	36.00	0.0	17.20	10.50	15.42
	29XXX	0.0	0.0	43.00	21.00	37.00
	ENTIRE A/C	4.00	0.0	1.39	0.97	1.36
MMH	14XXX	0	0	21	48	69
	15XXX	11	0	19	17	47
	22XXX	0	0	133	18	151
	26XXX	2	0	8	62	72
	29XXX	6	0	19	31	56
	ENTIRE A/C	75	0	347	633	1055
MMH/FH	14XXX	0.0	0.0	0.24	0.76	0.37
	15XXX	0.31	0.0	0.22	0.27	0.25
	22XXX	0.0	0.0	1.55	0.29	0.82
	26XXX	0.06	0.0	0.09	0.98	0.39
	29XXX	0.17	0.0	0.22	0.49	0.30
	ENTIRE A/C	2.08	0.0	4.03	10.05	5.70
MMH/MA	14XXX	0.0	0.0	3.50	8.00	5.75
	15XXX	3.67	0.0	1.58	2.83	2.24
	22XXX	0.0	0.0	10.23	2.00	6.86
	26XXX	2.00	0.0	1.33	6.20	4.24
	29XXX	1.50	0.0	6.33	10.33	5.60
	ENTIRE A/C	4.41	0.0	3.30	4.55	4.04

	WUC	1/74 THRU 6/74	UH-1N 7/74 THRU 12/74	NASC 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		421.	576.	370.	410.	1777.
AVG.#OF AC		3.50	3.90	3.20	4.30	3.72
NO OF FLTS		290.	398.	259.	307.	1254.
MA'S	14XXX	8	13	18	17	56
	15XXX	10	12	21	30	73
	22XXX	17	19	31	29	96
	26XXX	8	15	12	19	54
	29XXX	13	25	12	18	68
	ENTIRE A/C	227	262	211	318	1018
MFHBMA	14XXX	52.63	44.31	20.56	24.12	31.73
	15XXX	42.10	48.00	17.62	13.67	24.34
	22XXX	24.76	30.32	11.94	14.14	18.51
	26XXX	52.63	38.40	30.83	21.58	32.91
	29XXX	32.38	23.04	30.83	22.78	26.13
	ENTIRE A/C	1.85	2.20	1.75	1.29	1.75
FAILURES	14XXX	5	6	12	10	33
	15XXX	4	7	15	10	36
	22XXX	14	10	21	14	59
	26XXX	5	9	9	10	33
	29XXX	6	18	11	9	44
	ENTIRE A/C	100	135	132	164	531
MFHBF	14XXX	84.20	96.00	30.83	41.00	53.85
	15XXX	105.25	82.29	24.67	41.00	49.36
	22XXX	30.07	57.60	17.62	29.29	30.12
	26XXX	84.20	64.00	41.11	41.00	53.85
	29XXX	70.17	32.00	33.64	45.56	40.39
	ENTIRE A/C	4.21	4.27	2.80	2.50	3.35
MMH	14XXX	28	37	61	60	186
	15XXX	29	16	86	85	216
	22XXX	48	850	162	596	1656
	26XXX	17	31	37	68	153
	29XXX	19	65	38	118	240
	ENTIRE A/C	618	1541	867	1792	4818
MMH/FH	14XXX	0.07	0.06	0.16	0.15	0.10
	15XXX	0.07	0.03	0.23	0.21	0.12
	22XXX	0.11	1.48	0.44	1.45	0.93
	26XXX	0.04	0.05	0.10	0.17	0.09
	29XXX	0.05	0.11	0.10	0.29	0.14
	ENTIRE A/C	1.47	2.68	2.34	4.37	2.71
MMH/MA	14XXX	3.50	2.85	3.39	3.53	3.32
	15XXX	2.90	1.33	4.10	2.83	2.96
	22XXX	2.82	44.74	5.23	20.55	17.25
	26XXX	2.13	2.07	3.08	3.58	2.83
	29XXX	1.46	2.60	3.17	6.56	3.53
	ENTIRE A/C	2.72	5.88	4.11	5.64	4.73

AH-1J NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		327.	210.	208.	188.	933.
AVG.#OF AC		2.00	2.00	1.30	1.00	1.57
NO OF FLTS		238.	127.	110.	105.	580.
MA'S	14XXX	13	9	13	14	49
	15XXX	14	9	21	21	65
	22XXX	22	18	22	28	90
	26XXX	12	15	17	29	73
	29XXX	12	12	23	28	75
	ENTIRE A/C	205	164	240	243	852
MFHBMA	14XXX	25.15	23.33	16.00	13.43	19.04
	15XXX	23.36	23.33	9.90	8.95	14.35
	22XXX	14.86	11.67	9.45	6.71	10.37
	26XXX	27.25	14.00	12.24	6.48	12.78
	29XXX	27.25	17.50	9.04	6.71	12.44
	ENTIRE A/C	1.60	1.28	0.87	0.77	1.10
FAILURES	14XXX	5	8	10	7	30
	15XXX	11	5	14	15	45
	22XXX	13	9	14	21	57
	26XXX	6	7	4	18	35
	29XXX	9	8	18	22	57
	ENTIRE A/C	119	100	136	148	503
MFHRF	14XXX	65.40	26.25	20.80	26.86	31.10
	15XXX	29.73	42.00	14.86	12.53	20.73
	22XXX	25.15	23.33	14.86	8.95	16.37
	26XXX	54.50	30.00	52.00	10.44	26.66
	29XXX	36.33	26.25	11.56	8.55	16.37
	ENTIRE A/C	2.75	2.10	1.53	1.27	1.85
MMH	14XXX	19	13	44	141	217
	15XXX	76	108	78	35	297
	22XXX	27	56	151	324	558
	26XXX	60	62	26	281	429
	29XXX	20	32	72	123	247
	ENTIRE A/C	480	499	677	1275	2931
MMH/FH	14XXX	0.06	0.06	0.21	0.75	0.23
	15XXX	0.23	0.51	0.37	0.19	0.32
	22XXX	0.08	0.27	0.73	1.72	0.60
	26XXX	0.18	0.30	0.12	1.49	0.46
	29XXX	0.06	0.15	0.35	0.65	0.26
	ENTIRE A/C	1.47	2.38	3.25	6.78	3.14
MMH/MA	14XXX	1.46	1.44	3.38	10.07	4.43
	15XXX	5.43	12.00	3.71	1.67	4.57
	22XXX	1.23	3.11	6.86	11.57	6.20
	26XXX	5.00	4.13	1.53	9.69	5.88
	29XXX	1.67	2.67	3.13	4.39	3.29
	ENTIRE A/C	2.34	3.04	2.82	5.25	3.44

UH-1H NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		109.	95.	102.	92.	398.
AVG.#OF AC		1.00	1.00	1.00	1.00	1.00
NO OF FLTS		115.	110.	107.	64.	396.
MA'S	14XXX	10	7	2	2	21
	15XXX	13	16	6	0	35
	22XXX	2	5	3	3	13
	26XXX	4	27	1	6	38
	29XXX	4	6	3	1	14
	ENTIRE A/C	65	93	31	97	286
MFHBMA	14XXX	10.90	13.57	51.00	46.00	18.95
	15XXX	8.38	5.94	17.00	0.0	11.37
	22XXX	54.50	19.00	34.00	30.67	30.62
	26XXX	27.25	3.52	102.00	15.33	10.47
	29XXX	27.25	15.83	34.00	92.00	28.43
	ENTIRE A/C	1.68	1.02	3.29	0.95	1.39
FAILURES	14XXX	6	6	2	2	16
	15XXX	7	13	2	0	22
	22XXX	1	4	0	2	7
	26XXX	3	18	0	3	24
	29XXX	2	2	1	0	5
	ENTIRE A/C	41	62	15	39	157
MFHBF	14XXX	18.17	15.83	51.00	46.00	24.88
	15XXX	15.57	7.31	51.00	0.0	18.09
	22XXX	109.00	23.75	0.0	46.00	56.86
	26XXX	36.33	5.28	0.0	30.67	16.58
	29XXX	54.50	47.50	102.00	0.0	79.60
	ENTIRE A/C	2.66	1.53	6.80	2.36	2.54
MMH	14XXX	20	25	3	5	53
	15XXX	22	93	19	0	134
	22XXX	3	18	9	7	37
	26XXX	10	134	4	13	161
	29XXX	4	16	2	1	23
	ENTIRE A/C	113	367	86	384	950
MMH/FH	14XXX	0.18	0.26	0.03	0.05	0.13
	15XXX	0.20	0.98	0.19	0.0	0.34
	22XXX	0.03	0.19	0.09	0.08	0.09
	26XXX	0.09	1.41	0.04	0.14	0.40
	29XXX	0.04	0.17	0.02	0.01	0.06
	ENTIRE A/C	1.04	3.86	0.84	4.17	2.39
MMH/MA	14XXX	2.00	3.57	1.50	2.50	2.52
	15XXX	1.69	5.81	3.17	0.0	3.83
	22XXX	1.50	3.60	3.00	2.33	2.85
	26XXX	2.50	4.96	4.00	2.17	4.24
	29XXX	1.00	2.67	0.67	1.00	1.64
	ENTIRE A/C	1.74	3.95	2.77	3.96	3.32

UH-1E NASC

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		0.	23.	42.	0.	65.
AVG.#OF AC		0.90	1.10	1.00	0.0	1.00
NO OF FLTS		127.	18.	36.	0.	181.
MA'S	14XXX	0	0	5	0	5
	15XXX	0	0	13	0	13
	22XXX	0	0	0	0	0
	26XXX	0	1	2	0	3
	29XXX	0	0	1	0	1
	ENTIRE A/C	0	6	43	0	49
MFHBMA	14XXX	0.0	0.0	8.40	0.0	13.00
	15XXX	0.0	0.0	3.23	0.0	5.00
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	0.0	23.00	21.00	0.0	21.67
	29XXX	0.0	0.0	42.00	0.0	65.00
	ENTIRE A/C	0.0	3.83	0.98	0.0	1.33
FAILURES	14XXX	0	0	3	0	3
	15XXX	0	0	3	0	3
	22XXX	0	0	0	0	0
	26XXX	0	0	0	0	0
	29XXX	0	0	1	0	1
	ENTIRE A/C	0	2	19	0	21
MFHBF	14XXX	0.0	0.0	14.00	0.0	21.67
	15XXX	0.0	0.0	14.00	0.0	21.67
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	0.0	0.0	0.0	0.0	0.0
	29XXX	0.0	0.0	42.00	0.0	65.00
	ENTIRE A/C	0.0	11.50	2.21	0.0	3.10
MMH	14XXX	0	0	40	0	40
	15XXX	0	0	54	0	54
	22XXX	0	0	0	0	0
	26XXX	0	1	35	0	36
	29XXX	0	0	2	0	2
	ENTIRE A/C	0	17	345	0	362
MMH/FH	14XXX	0.0	0.0	0.95	0.0	0.62
	15XXX	0.0	0.0	1.29	0.0	0.83
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	0.0	0.04	0.83	0.0	0.55
	29XXX	0.0	0.0	0.05	0.0	0.03
	ENTIRE A/C	0.0	0.74	8.21	0.0	5.57
MMH/MA	14XXX	0.0	0.0	8.00	0.0	8.00
	15XXX	0.0	0.0	4.15	0.0	4.15
	22XXX	0.0	0.0	0.0	0.0	0.0
	26XXX	0.0	1.00	17.50	0.0	12.00
	29XXX	0.0	0.0	2.00	0.0	2.00
	ENTIRE A/C	0.0	2.83	8.02	0.0	7.39

UH-1N NATRA

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		1618.	927.	901.	710.	4156.
AVG.#OF AC		8.00	5.80	4.40	6.40	6.15
NO OF FLTS		1190.	912.	652.	730.	3484.
MA'S	14XXX	72	38	76	108	294
	15XXX	121	115	73	167	476
	22XXX	117	117	71	168	473
	26XXX	92	49	51	49	241
	29XXX	89	56	51	86	282
	ENTIRE A/C	1235	975	891	1322	4423
MFHBMA	14XXX	22.47	24.39	11.86	6.57	14.14
	15XXX	13.37	8.06	12.34	4.25	8.73
	22XXX	13.83	7.92	12.69	4.23	8.79
	26XXX	17.59	18.92	17.67	14.49	17.24
	29XXX	18.18	16.55	17.67	8.26	14.74
	ENTIRE A/C	1.31	0.95	1.01	0.54	0.94
FAILURES	14XXX	33	26	42	50	151
	15XXX	52	37	36	65	190
	22XXX	75	54	37	99	265
	26XXX	49	23	23	22	117
	29XXX	61	34	29	51	175
	ENTIRE A/C	605	423	410	587	2025
MFHBF	14XXX	49.03	35.65	21.45	14.20	27.52
	15XXX	31.12	25.05	25.03	10.92	21.87
	22XXX	21.57	17.17	24.35	7.17	15.68
	26XXX	33.02	40.30	39.17	32.27	35.52
	29XXX	26.52	27.26	31.07	13.92	23.75
	ENTIRE A/C	2.67	2.19	2.20	1.21	2.05
MMH	14XXX	321	188	608	588	1705
	15XXX	340	783	224	706	2053
	22XXX	1249	1600	219	2071	5139
	26XXX	334	298	69	272	973
	29XXX	196	208	124	432	960
	ENTIRE A/C	4358	4675	2733	5980	17746
MMH/FH	14XXX	0.20	0.20	0.67	0.83	0.41
	15XXX	0.21	0.84	0.25	0.99	0.49
	22XXX	0.77	1.73	0.24	2.92	1.24
	26XXX	0.21	0.32	0.08	0.38	0.23
	29XXX	0.12	0.22	0.14	0.61	0.23
	ENTIRE A/C	2.69	5.04	3.03	8.42	4.27
MMH/MA	14XXX	4.46	4.95	8.00	5.44	5.80
	15XXX	2.81	6.81	3.07	4.23	4.31
	22XXX	10.68	13.68	3.08	12.33	10.86
	26XXX	3.63	6.08	1.35	5.55	4.04
	29XXX	2.20	3.71	2.43	5.02	3.40
	ENTIRE A/C	3.53	4.79	3.07	4.52	4.01

	WUC	1/74 THRU 6/74	UH-1H 7/74 THRU 12/74	NATRA 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		4124.	3249.	4036.	3473.	14882.
AVG.#OF AC		12.60	12.50	13.00	12.80	12.72
NO OF FLTS		2404.	2048.	2566.	2335.	9353.
MA'S	14XXX	157	256	354	267	1034
	15XXX	299	428	445	455	1627
	22XXX	100	125	168	154	547
	26XXX	177	195	250	238	860
	29XXX	116	118	164	151	549
	ENTIRE A/C	1726	2367	3197	2785	10075
MFHBMA	14XXX	26.27	12.69	11.40	13.01	14.39
	15XXX	13.79	7.59	9.07	7.63	9.15
	22XXX	41.24	25.99	24.02	22.55	27.21
	26XXX	23.30	16.66	16.14	14.59	17.30
	29XXX	35.55	27.53	24.61	23.00	27.11
	ENTIRE A/C	2.39	1.37	1.26	1.25	1.48
FAILURES	14XXX	99	147	173	127	546
	15XXX	171	252	223	195	841
	22XXX	58	66	71	84	279
	26XXX	108	101	115	110	434
	29XXX	63	63	92	65	283
	ENTIRE A/C	972	1195	1553	1208	4928
MFHBF	14XXX	41.66	22.10	23.33	27.35	27.26
	15XXX	24.12	12.89	18.10	17.81	17.70
	22XXX	71.10	49.23	56.85	41.35	53.34
	26XXX	38.19	32.17	35.10	31.57	34.29
	29XXX	65.46	51.57	43.87	53.43	52.59
	ENTIRE A/C	4.24	2.72	2.60	2.87	3.02
MMH	14XXX	553	844	1190	815	3402
	15XXX	696	1022	1270	1211	4199
	22XXX	1047	445	633	726	2851
	26XXX	563	634	815	708	2720
	29XXX	206	170	282	304	962
	ENTIRE A/C	5497	6336	9680	8939	30452
MMH/FH	14XXX	0.13	0.26	0.29	0.23	0.23
	15XXX	0.17	0.31	0.31	0.35	0.28
	22XXX	0.25	0.14	0.16	0.21	0.19
	26XXX	0.14	0.20	0.20	0.20	0.18
	29XXX	0.05	0.05	0.07	0.09	0.06
	ENTIRE A/C	1.33	1.95	2.40	2.57	2.05
MMH/MA	14XXX	3.52	3.30	3.36	3.05	3.29
	15XXX	2.33	2.39	2.85	2.66	2.58
	22XXX	10.47	3.56	3.77	4.71	5.21
	26XXX	3.18	3.25	3.26	2.97	3.16
	29XXX	1.78	1.44	1.72	2.01	1.75
	ENTIRE A/C	3.18	2.68	3.03	3.21	3.02

UH-1E NATRA

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		1683.	1263.	1987.	3864.	8797.
AVG.#OF AC		5.90	5.90	6.10	11.80	7.42
NO OF FLTS		949.	775.	1204.	2386.	5314.
MA'S	14XXX	128	130	194	286	738
	15XXX	196	211	208	476	1091
	22XXX	56	74	92	171	393
	26XXX	97	76	167	216	556
	29XXX	108	94	211	186	599
	ENTIRE A/C	1131	1196	1794	2918	7039
MFHBMA	14XXX	13.15	9.72	10.24	13.51	11.92
	15XXX	8.59	5.99	9.55	8.12	8.06
	22XXX	30.05	17.07	21.60	22.60	22.38
	26XXX	17.35	16.62	11.90	17.89	15.82
	29XXX	15.58	13.44	9.42	20.77	14.69
	ENTIRE A/C	1.49	1.06	1.11	1.32	1.25
FAILURES	14XXX	69	66	98	160	393
	15XXX	104	98	108	226	536
	22XXX	33	37	52	80	202
	26XXX	57	39	76	106	278
	29XXX	64	57	134	88	343
	ENTIRE A/C	609	567	915	1402	3493
MFHBF	14XXX	24.39	19.14	20.28	24.15	22.38
	15XXX	16.18	12.89	18.40	17.10	16.41
	22XXX	51.00	34.14	38.21	48.30	43.55
	26XXX	29.53	32.38	26.14	36.45	31.64
	29XXX	26.30	22.16	14.83	43.91	25.65
	ENTIRE A/C	2.76	2.23	2.17	2.76	2.52
MMH	14XXX	397	372	618	869	2256
	15XXX	467	502	753	1666	3388
	22XXX	270	172	462	889	1793
	26XXX	369	139	434	461	1403
	29XXX	161	196	317	311	985
	ENTIRE A/C	3345	3285	5270	8900	20800
MMH/FH	14XXX	0.24	0.29	0.31	0.22	0.26
	15XXX	0.28	0.40	0.38	0.43	0.39
	22XXX	0.16	0.14	0.23	0.23	0.20
	26XXX	0.22	0.11	0.22	0.12	0.16
	29XXX	0.10	0.16	0.16	0.08	0.11
	ENTIRE A/C	1.99	2.60	2.65	2.30	2.36
MMH/MA	14XXX	3.10	2.86	3.19	3.04	3.06
	15XXX	2.38	2.38	3.62	3.50	3.11
	22XXX	4.82	2.32	5.02	5.20	4.56
	26XXX	3.80	1.83	2.60	2.13	2.52
	29XXX	1.49	2.09	1.50	1.67	1.64
	ENTIRE A/C	2.96	2.75	2.94	3.05	2.95

CH-53A RESFOR

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		2139.	1993.	2102.	2378.	8612.
AVG.#OF AC		18.10	17.70	16.10	18.80	17.68
NO OF FLTS		1368.	1412.	1401.	1906.	6087.
MA'S	14XXX	223	282	304	320	1129
	15XXX	271	289	443	480	1483
	22XXX	164	129	132	165	590
	26XXX	208	181	177	197	763
	29XXX	215	148	126	209	698
	ENTIRE A/C	2992	2859	2875	3328	12054
MFHBMA	14XXX	9.59	7.07	6.91	7.43	7.63
	15XXX	7.89	6.90	4.74	4.95	5.81
	22XXX	13.04	15.45	15.92	14.41	14.60
	26XXX	10.28	11.01	11.88	12.07	11.29
	29XXX	9.95	13.47	16.68	11.38	12.34
	ENTIRE A/C	0.71	0.70	0.73	0.71	0.71
FAILURES	14XXX	120	146	144	174	584
	15XXX	137	164	222	238	761
	22XXX	69	77	55	97	318
	26XXX	124	103	111	94	432
	29XXX	109	84	61	106	360
	ENTIRE A/C	1667	1573	1510	1752	6502
MFHBF	14XXX	17.82	13.65	14.60	13.67	14.75
	15XXX	15.61	12.15	9.47	9.99	11.32
	22XXX	24.03	25.68	38.22	24.52	27.08
	26XXX	17.25	19.35	18.94	25.30	19.94
	29XXX	19.62	23.73	34.46	22.43	23.92
	ENTIRE A/C	1.28	1.27	1.39	1.36	1.32
MMH	14XXX	1171	834	1373	1355	4733
	15XXX	1252	1445	3586	3284	9567
	22XXX	1789	590	468	635	3482
	26XXX	1096	701	887	1121	3805
	29XXX	555	320	404	758	2037
	ENTIRE A/C	12501	10371	13509	15552	51933
MMH/FH	14XXX	0.55	0.42	0.65	0.57	0.55
	15XXX	0.59	0.73	1.71	1.38	1.11
	22XXX	0.84	0.30	0.22	0.27	0.40
	26XXX	0.51	0.35	0.42	0.47	0.44
	29XXX	0.26	0.16	0.19	0.32	0.24
	ENTIRE A/C	5.84	5.20	6.43	6.54	6.03
MMH/MA	14XXX	5.25	2.96	4.52	4.23	4.19
	15XXX	4.62	5.00	8.09	6.84	6.45
	22XXX	10.91	4.57	3.55	3.85	5.90
	26XXX	5.27	3.87	5.01	5.69	4.99
	29XXX	2.58	2.16	3.21	3.63	2.92
	ENTIRE A/C	4.18	3.63	4.70	4.67	4.31

	WUC	1/74 THRU 6/74	CH-460 7/74 THRU 12/74	RESFOR 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3784.	4204.	3780.	3810.	15578.
AVG.#OF AC		32.40	37.70	37.30	37.80	36.30
NO OF FLTS		2313.	2737.	2551.	2835.	10436.
MA'S	14XXX	386	435	422	424	1667
	15XXX	1165	1187	1070	870	4292
	22XXX	213	296	290	273	1072
	26XXX	296	343	405	356	1400
	29XXX	248	290	314	288	1140
	ENTIRE A/C	5450	7107	6859	6424	25840
MFHBMA	14XXX	9.80	9.66	8.96	8.99	9.34
	15XXX	3.25	3.54	3.53	4.38	3.63
	22XXX	17.77	14.20	13.03	13.96	14.53
	26XXX	12.78	12.26	9.33	10.70	11.13
	29XXX	15.26	14.50	12.04	13.23	13.66
	ENTIRE A/C	0.69	0.59	0.55	0.59	0.60
FAILURES	14XXX	190	223	199	179	791
	15XXX	327	397	395	426	1545
	22XXX	106	155	121	127	509
	26XXX	172	181	178	165	696
	29XXX	127	159	131	158	575
	ENTIRE A/C	2620	3679	3139	3127	12565
MFHBF	14XXX	19.92	18.85	18.99	21.28	19.69
	15XXX	11.57	10.59	9.57	8.94	10.08
	22XXX	35.70	27.12	31.24	30.00	30.61
	26XXX	22.00	23.23	21.24	23.09	22.38
	29XXX	29.80	26.44	28.85	24.11	27.09
	ENTIRE A/C	1.44	1.14	1.20	1.22	1.24
MMH	14XXX	1488	1956	1669	1615	6728
	15XXX	3302	4581	4355	3722	15960
	22XXX	1905	1793	2529	1800	8027
	26XXX	1837	2181	2691	2530	9239
	29XXX	764	945	962	903	3574
	ENTIRE A/C	20415	27348	27533	26299	101595
MMH/FH	14XXX	0.39	0.47	0.44	0.42	0.43
	15XXX	0.87	1.09	1.15	0.98	1.02
	22XXX	0.50	0.43	0.67	0.47	0.52
	26XXX	0.49	0.52	0.71	0.66	0.59
	29XXX	0.20	0.22	0.25	0.24	0.23
	ENTIRE A/C	5.40	6.51	7.28	6.90	6.52
MMH/MA	14XXX	3.85	4.50	3.95	3.81	4.04
	15XXX	2.83	3.86	4.07	4.28	3.72
	22XXX	8.94	6.06	8.72	6.59	7.49
	26XXX	6.21	6.36	6.64	7.11	6.60
	29XXX	3.08	3.26	3.06	3.14	3.14
	ENTIRE A/C	3.75	3.85	4.01	4.09	3.93

	WUC	1/74 THRU 6/74	SH-36 7/74 THRU 12/74	RESFOR 1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		1806.	1573.	1562.	2939.	7880.
AVG.#OF AC		7.00	7.60	9.00	15.80	9.85
NO OF FLTS		638.	479.	659.	939.	2715.
MA'S	14XXX	38	57	64	90	249
	15XXX	115	138	184	379	816
	22XXX	72	77	79	172	400
	26XXX	111	62	100	189	462
	29XXX	60	39	77	147	323
	ENTIRE A/C	1576	1631	2123	4449	9779
MFHBMA	14XXX	47.53	27.60	24.41	32.66	31.65
	15XXX	15.70	11.40	8.49	7.75	9.66
	22XXX	25.08	20.43	19.77	17.09	19.70
	26XXX	16.27	25.37	15.62	15.55	17.06
	29XXX	30.10	40.33	20.29	19.99	24.40
	ENTIRE A/C	1.15	0.96	0.74	0.66	0.81
FAILURES	14XXX	21	29	38	51	139
	15XXX	61	62	85	183	391
	22XXX	36	43	27	77	183
	26XXX	56	38	48	92	234
	29XXX	33	22	32	76	163
	ENTIRE A/C	832	876	1026	2235	4969
MFHBF	14XXX	86.00	54.24	41.11	57.63	56.69
	15XXX	29.61	25.37	18.38	16.06	20.15
	22XXX	50.17	36.58	57.85	38.17	43.06
	26XXX	32.25	41.39	32.54	31.95	33.68
	29XXX	54.73	71.50	48.81	38.67	48.34
	ENTIRE A/C	2.17	1.80	1.52	1.31	1.59
MMH	14XXX	120	215	298	404	1037
	15XXX	411	528	737	1463	3139
	22XXX	338	543	460	1377	2738
	26XXX	1042	526	576	937	3081
	29XXX	151	116	192	416	875
	ENTIRE A/C	6497	6356	8162	19615	40630
MMH/FH	14XXX	0.07	0.14	0.19	0.14	0.13
	15XXX	0.23	0.34	0.47	0.50	0.40
	22XXX	0.19	0.35	0.31	0.47	0.35
	26XXX	0.58	0.33	0.37	0.32	0.39
	29XXX	0.08	0.07	0.12	0.14	0.11
	ENTIRE A/C	3.60	4.04	5.23	6.67	5.16
MMH/MA	14XXX	3.16	3.77	4.66	4.49	4.16
	15XXX	3.57	3.83	4.01	3.86	3.85
	22XXX	4.69	7.05	6.08	8.01	6.84
	26XXX	9.39	8.48	5.76	4.96	6.67
	29XXX	2.52	2.97	2.49	2.83	2.71
	ENTIRE A/C	4.12	3.90	3.84	4.41	4.15

SH-3A RESFOR

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		5302.	4613.	4163.	3423.	17501.
AVG.#OF AC		22.70	22.40	21.20	18.90	21.30
NO OF FLTS		1757.	1586.	1641.	1315.	6299.
MA'S	14XXX	129	127	115	120	491
	15XXX	735	660	820	453	2668
	22XXX	280	364	316	363	1323
	26XXX	287	285	346	305	1223
	29XXX	167	244	303	168	882
	ENTIRE A/C	6609	6370	7036	5712	25727
MFHBMA	14XXX	41.10	36.32	36.20	28.52	35.64
	15XXX	7.21	6.99	5.08	7.56	6.56
	22XXX	18.94	12.67	13.17	9.43	13.23
	26XXX	18.47	16.19	12.03	11.22	14.31
	29XXX	31.75	18.91	13.74	20.37	19.84
	ENTIRE A/C	0.80	0.72	0.59	0.60	0.68
FAILURES	14XXX	90	90	71	72	323
	15XXX	415	348	366	231	1360
	22XXX	150	179	176	195	700
	26XXX	148	143	175	156	622
	29XXX	99	150	150	86	485
	ENTIRE A/C	3782	3532	3618	2955	13887
MFHBF	14XXX	58.91	51.26	58.63	47.54	54.18
	15XXX	12.78	13.26	11.37	14.82	12.87
	22XXX	35.35	25.77	23.65	17.55	25.00
	26XXX	35.82	32.26	23.79	21.94	28.14
	29XXX	53.56	30.75	27.75	39.80	36.08
	ENTIRE A/C	1.40	1.31	1.15	1.16	1.26
MMH	14XXX	290	508	422	294	1514
	15XXX	2733	2230	2620	1193	8776
	22XXX	1486	2021	1630	1663	6800
	26XXX	2027	1527	1650	934	6138
	29XXX	394	543	624	295	1856
	ENTIRE A/C	23545	23160	25158	16143	88006
MMH/FH	14XXX	0.05	0.11	0.10	0.09	0.09
	15XXX	0.52	0.48	0.63	0.35	0.50
	22XXX	0.28	0.44	0.39	0.49	0.39
	26XXX	0.38	0.33	0.40	0.27	0.35
	29XXX	0.07	0.12	0.15	0.09	0.11
	ENTIRE A/C	4.44	5.02	6.04	4.72	5.03
MMH/MA	14XXX	2.25	4.00	3.67	2.45	3.08
	15XXX	3.72	3.38	3.20	2.63	3.29
	22XXX	5.31	5.55	5.16	4.58	5.14
	26XXX	7.06	5.36	4.77	3.06	5.02
	29XXX	2.36	2.23	2.06	1.76	2.10
	ENTIRE A/C	3.56	3.64	3.58	2.83	3.42

UH-1E RESFOR

	WUC	1/74 THRU 6/74	7/74 THRU 12/74	1/75 THRU 6/75	7/75 THRU 12/75	TOTAL
FLT.HRS.		3275.	2499.	2479.	2655.	10908.
AVG.#OF AC		20.00	16.60	15.80	17.80	17.55
NO OF FLTS		2124.	1743.	1735.	1794.	7396.
MA'S	14XXX	219	144	222	154	739
	15XXX	390	312	326	316	1344
	22XXX	124	123	58	57	362
	26XXX	239	142	160	103	644
	29XXX	210	141	122	91	564
	ENTIRE A/C	2538	2033	2091	1802	8464
MFHBMA	14XXX	14.95	17.35	11.17	17.24	14.76
	15XXX	8.40	8.01	7.60	8.40	8.12
	22XXX	26.41	20.32	42.74	46.58	30.13
	26XXX	13.70	17.60	15.49	25.78	16.94
	29XXX	15.60	17.72	20.32	29.18	19.34
	ENTIRE A/C	1.29	1.23	1.19	1.47	1.29
FAILURES	14XXX	130	84	130	93	437
	15XXX	227	157	174	155	713
	22XXX	78	72	29	31	210
	26XXX	148	88	86	60	382
	29XXX	139	102	76	50	367
	ENTIRE A/C	1454	1148	1092	901	4595
MFHBF	14XXX	25.19	29.75	19.07	28.55	24.96
	15XXX	14.43	15.92	14.25	17.13	15.30
	22XXX	41.99	34.71	85.48	85.65	51.94
	26XXX	22.13	28.40	28.83	44.25	28.55
	29XXX	23.56	24.50	32.62	53.10	29.72
	ENTIRE A/C	2.25	2.18	2.27	2.95	2.37
MMH	14XXX	834	586	1186	833	3439
	15XXX	1737	1646	1453	2135	6971
	22XXX	571	525	433	651	2180
	26XXX	1075	652	648	649	3024
	29XXX	318	436	346	339	1439
	ENTIRE A/C	9503	9056	11411	10218	40188
MMH/FH	14XXX	0.25	0.23	0.48	0.31	0.32
	15XXX	0.53	0.66	0.59	0.80	0.64
	22XXX	0.17	0.21	0.17	0.25	0.20
	26XXX	0.33	0.26	0.26	0.24	0.28
	29XXX	0.10	0.17	0.14	0.13	0.13
	ENTIRE A/C	2.90	3.62	4.60	3.85	3.68
MMH/MA	14XXX	3.81	4.07	5.34	5.41	4.65
	15XXX	4.45	5.28	4.46	6.76	5.19
	22XXX	4.60	4.27	7.47	11.42	6.02
	26XXX	4.50	4.59	4.05	6.30	4.70
	29XXX	1.51	3.09	2.84	3.73	2.55
	ENTIRE A/C	3.74	4.45	5.46	5.67	4.75